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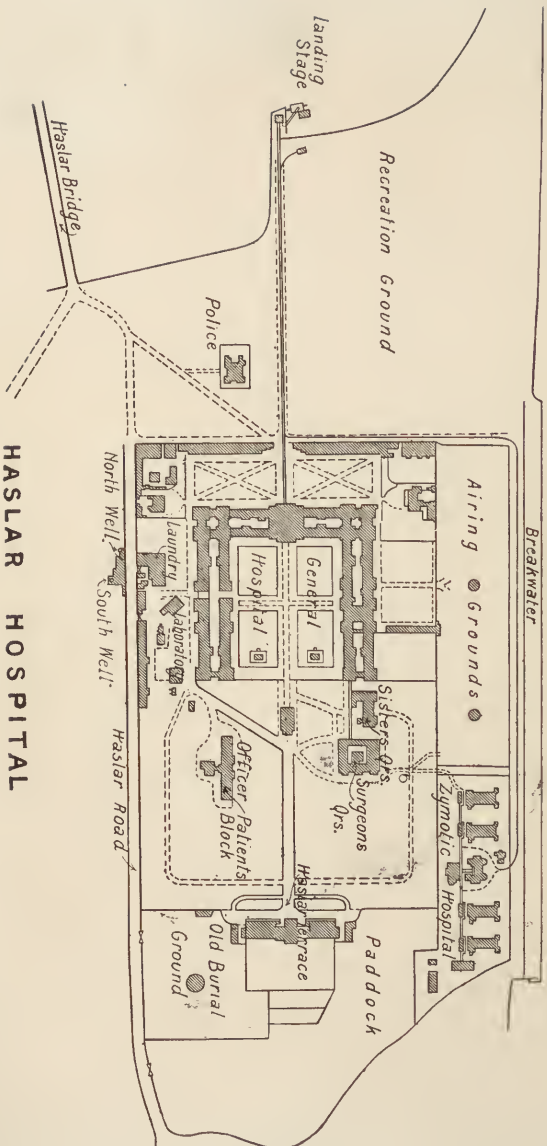


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HASLAR HOSPITAL

A HISTORY OF HASLAR HOSPITAL.

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BY

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PREFACE.

IT has been the custom to give a short account of the construction of the hospital to the newly entered Naval Surgeons, who join Haslar for a course of instruction in subjects appertaining to the Navy. In compiling the material for such a description, the following facts in the history of the hospital have been brought to light, and have gradually accumulated, until I have been enabled to present them in this short account of Haslar, from its earliest days, to the present time.

In lifting the curtain which has so long hid the actors in this particular scene, I hope I have been able to show them in their natural surroundings, without malice or exaggeration.

I am indebted for several facts in the early history of the hospital to Deputy Inspector General Gimlette, R.N. and for some photographs to Gerald Sichel, late Surgeon, R.N.

W. T.

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CHAPTER I.

The treatment of sick and wounded before the establishment of Naval Hospitals.

LONG before hospitals were founded by the state for the treatment of its sick and wounded, a scheme was devised by Sir Francis Drake and Sir John Hawkins whereby they endeavoured to procure funds, not only for the treatment of the sick and wounded, but more especially to maintain those who had been maimed in their country's fights.

For this purpose an act was passed in the reign of Queen Elizabeth, after the defeat of the Spanish Armada, by which every parish was assessed at a weekly sum for the maintenance of disabled seamen, born and resident within the county. This was the origin of the "Chatham Chest Fund," the resources of which were increased by the seamen voluntarily agreeing to leave certain sums "defaulted" out of their wages to form a fund for their relief. This fund was subsequently further augmented by the compulsory stoppage of sixpence per month from the seamen's wages; this was instituted by Sir Robert Mansell, then Treasurer of the Navy, about 1604. It will be seen

that this fund was 'a sort of "Benefit Society," the moneys of which were controlled by the Commissioners for the sick and hurt. Any surplus money was deposited in a strong iron chest, with five locks, which was kept in the south porch of Chatham Parish Church.

In the reign of Charles II. the chest was presented by the crown with twelve acres of land ; and in 1688, it was granted the fines imposed by Courts-Martial.

In 1803 the chest was removed to Greenwich, and in 1814 the funds were amalgamated with those of Greenwich Hospital.

The stoppage of 6d. per month, however, from the wages of every seamen of the Royal Navy, did not cease until 1829. The fund at the time of the amalgamation amounted to £1,355,400, together with its estates.

The pensions awarded from the funds varied £12 a year for the loss of both eyes, to £4 a year for the loss of one eye, or for fracture of the skull.

Reference to the Chatham Chest fund occurs in the celebrated diary of Samuel Pepys, who remarks chiefly on the way corrupt officials helped themselves out of it. The chest is now in the Royal Naval College, where it was deposited by the Admiralty, in 1845.

In the time of the early Stuarts, the sick and wounded from the fleets were landed for treatment in

the civil hospitals of the country, and when these were not available, they were put into private lodgings, and even into public houses for treatment.

We can well picture to ourselves the kind of treatment accorded to the seamen of that day who were lodged in public-houses, and its effect upon the disease and discipline must have been the reverse of beneficial.

In the reign of Charles I. it was ordered "that the moiety of all the hospitals in England should be reserved during the time of war at sea, after a certain date, for the cure of the sick and hurt in the service of the Navy. The Mayors, Bailiffs, and other Magistrates in port towns were enjoined to see that the necessary accommodation was provided for the relief and comfort of those that might be sent on shore. They were also requested to give notice to the ministers of the several parishes, in and near the places where the seamen were quartered, "to visit them, pray with, and administer such charitable and christian offices as their necessities and conditions shall require, for which they shall receive all due acknowledgment from the Commissioner for the sick and hurt."

We also find the Archbishop of Canterbury and other Councillors ordering that no more sick and hurt should be taken into the hospitals of St Bartholomew and St. Thomas, but that all the accommodation should be reserved for the sick and wounded of His Majesty's Navy.

The Lord Great Chamberlain, in 1664, ordered that the Master of the Savoy hospital should have the place fitted for the sick and wounded that were likely to result from the Naval expedition.

He was required to give free admission to officers, seamen, marines, and soldiers of the better sort as should be wounded in his Majesty's service at sea.

He was to provide the best that the hospital could afford in the way of bedding and accommodation.

The following places were appointed for the reception of sick and wounded men—London, Yarmouth, Ipswich, Southwold, Harwich, Chatham, Gravesend, Deal, Dover, Portsmouth, Weymouth, Dartmouth and Plymouth, and in other havens which were convenient for the Navy, so as to give speedy relief to the sick and wounded seamen and soldiers.

The crippled were distributed to Alms Houses scattered throughout the country, care being taken to send the patients to those houses which were situated in their native districts.

The authorities seem to have been anxious to do the best they could for the sick and wounded seamen, but funds for this purpose were apparently very small. We find frequent complaints that the Commissioners for the sick and hurt could not obtain money to pay for the quarters of those men put on shore from His Majesty's Ships. Also, that the state did not provide for the carriage of the patients from the waterside to

the hospitals, in London, but that this expense of transport fell upon the hospitals, and, it is said, that the men were often allowed to lie on Tower Hill for days until maggots were in their wounds.

Besides these public institutions, there were private hospitals owned by Civil Practitioners, where patients were treated on the contract system, at so much per head.

In the diary of Dr. Yonge of Plymouth we find an account, amusing in its candour, of the contract system of treatment. Dr. Yonge procured the Surgeon's place in a hospital that was set up for the sick and wounded, when war broke out with the Dutch, in 1672. "My pay was 5/- per diem, constant, and 3d. per each man for medicines.

I had also half a crown a day for each mate, and a mate for every 30 men, so that I had sometimes four mates' pay, and but one mate in being,

The 3d. per man seemed worst, but considering that many ran away as soon as they came, that most others were scurvy which costs little; the 3d. per man did well enough, though it was a small reward."

When we consider that the seamen were in those days pressed men, and men from jail and convict establishments, we can understand the large number who would run. The scurvy cases which remained were probably too ill to desert.

In 1764, after the war, Yonge had charge of the men who were sent ashore from the frigates ; these men were lodged with private individuals. He says "the terms were indeed other than formerly, in the war, I had now 6/8 per man. and 12d. per day for victuals. This I knew, if men came, would yield profit and credit."

After the sanguinary conflicts in the early years of the reign of William and Mary, the sick and wounded were landed in such numbers that the means provided for their accommodation and treatment proved quite inadequate. Orders were therefore given in 1691 to the Commissioners of the sick and hurt, to have a survey made of Carisbrook Castle and of the King's House at Greenwich, and to have a report sent as to their suitability as hospitals for sick and wounded, and what would be required ; and how long it would be before they would be ready for occupation.

Greenwich Hospital was not used so much for the treatment of sick and wounded as an Asylum for aged and disabled seamen. The widows also of sailors were provided for, by having the exclusive privilege of being nurses in the hospital. When the accommodation of the hospital became insufficient to relieve the worn out and crippled seamen of His Majesty's service, out pensions of £7 per annum were established.

The funds for Greenwich Hospital were derived from various sources, besides the Chatham Chest fund,

there were donations from the King; fines derived from smuggling: legacies from various individuals, but the most valuable acquisition was that of the forfeited estates of the Earl of Derwentwater, which produced over £20,000 a year.

CHAPTER II.

The first Hospital near Gosport.

THE first record of a hospital near Gosport is dated 1713.

It appears that one Nathaniel Jackson owned a hospital called Fortune Hospital, which was furnished with 700 beds, for the treatment of the seamen of the Royal Navy. This hospital was probably situated near where Forton Marine Barracks are now built, and would be conveniently placed for the landing of sick and wounded men from the ships in Portsmouth Harbour. Hospitals for the treatment of service men existed at both Fareham and Forton until 1763, when on the reduction of all Naval establishments to a peace footing at that date, they were abolished.

Mr. Jackson contracted with the Commissioners for the sick and hurt, for the treatment of the patients at so much per head, which, as we have seen, was the custom at that time. In fact, the system still survives at the present day in the treatment of the Coast Guard by Civil Practitioners, who are called "Surgeons and Agents."

REASONS FOR BUILDING ROYAL NAVAL HOSPITALS.

On 15th September 1744, the Navy Board presented a memorial to His Majesty, in Council, proposing to build Royal Naval Hospitals at Portsmouth, Plymouth, and Chatham, for the reception and cure of sick and wounded seamen sent on shore from His Majesty's ships. The reasons set forth for such a proposal were that "the want of such hospitals is so sensibly felt, and Your Majesty's service suffers so greatly from the loss of seamen, either by death or desertion, who are sent on shore for the cure of their distempers, that we think it our duty, humbly to renew our former application made to Your Majesty, on that subject, (26th Oct., 1741), upon the frequent complaints that we had received of the great disorders and irregularities committed at the place where the sick men are lodged, near Gosport. We ordered Sir John Belchen to send one of his chief Officers to visit the sick men there. He found such a scene of drunkenness, as is expressed in the report he made to the Admiral.

The Want of Royal Hospitals is the cause of the lodgings, diet and nursing of sick men being performed by contract ; a method liable to such abuses as are often fatal to the health of the seamen, notwithstanding all the care taken to prevent it. But when the folly of the poor men is considered, intoxicating

themselves with strong liquors in the height of their distempers, the great numbers that are swept away by such intemperance, and the desertion of great numbers that recover, both compassion to them and the interest of Your Majesty's service, requires the putting a speedy stop to an evil of such pernicious consequences, which can in no way be effectually done, but by building hospitals.

If it is thought too great an undertaking to erect hospitals at once at all the three above mentioned ports, we do humbly propose that one may be built at the port of Portsmouth, capable of receiving 1,500 patients, which may be completely done for £38,000, as appears by an estimate and plans annexed to the former memorial."

CHAPTER III.

Haslar Hospital.



Haslar, 1790.

At last it was decided, through the earnest solicitations of John, Fourth Earl of Sandwich, who was then First Lord of the Admiralty, to construct a Royal Naval Hospital, at Portsmouth. A vote was obtained, and the land purchased in 1745.

The site of the present hospital was said to be that of a farm, owned by one Hazelwood, however that may be, it is not the origin of the name Haslar, which is of much more ancient date than is generally supposed.

In an old charter of the town of Portsmouth, dated 1270, jurisdiction is given to the town authorities over the water from the east of Hambroke to Hasil-Horde, and inward as far as it ebbeth and floweth into Byrg or lake of Fareham, and to Palsgrove. Hambrook and Palsgrove, as well as Fareham, are still local names.

A round tower is shown on maps of the date of 1540, which occupied the position of Fort Monckton, and was called Haselworth (worth being A.s. for farm) Castle. An ancient description of the limits of the jurisdiction of the Mayor of Portsmouth, dated 1566, refers to Haslar, as Haselord Poynte. It will thus be seen that Haslar is derived from an old place name and not from an individual, and place names are generally of great antiquity.

The Hospital is situated on a peninsular piece of land overlooking Portsmouth Harbour and Spithead, having at its south-west extremity Fort Monckton, and on its north-east point stands Fort Blockhouse, guarding the entrance to Portsmouth Harbour.

Boats can approach within about 300 yards of the hospital, and patients are conveyed from the jetty in large four wheeled ambulances which run on rails. The rails follow the course of the old hospital sewer, which ran in a straight line from its inception near the church to its outfall in Haslar Creek, near to where the jetty is now erected.

In old times, as may be seen in several prints of the hospital, published at the end of the eighteenth century ; the water approached much nearer to the buildings than at the present day, but the land which is now used as a recreation ground by the hospital staff, and formerly by the St. Vincent Boys, was reclaimed from the mud in Haslar Creek, in 1872-76, and has much improved the general appearance and surroundings of the hospital, as well as having greatly increased its salubrity.

Geology. The geological formation of the site of Haslar Hospital, consists of the Fluvio-alluvial beds of Hampshire and the Isle of Wight, which belong to the Eocene division of the Tertiary strata, or neozoic period, that is, the most recent of the three great divisions of the earth's crust. The material and fossils of the surface-soil indicate a mixed sea and river origin.

The Tertiary or Neozoic strata overlies the chalk of the Secondary or Mesozoic period, and are in round numbers from 500 to 1700 ft. in thickness. They consist of clays and layers of flinty gravels, the different strata appearing in different localities. Thus the chalk of the secondary period crops out at the Portsdown Hills, on the other side of Portsmouth, on the north, and on the further side of the Isle of Wight, on the south.

At Stamshaw, a district beyond Portsmouth, and at Kingston Cross the Stamshaw clay appears on the surface.

The town of Portsmouth itself, and Gosport on this side of the water, stand on a flinty gravelly soil.

At Haslar there are five layers or strata to be made out:—

1. Surface soil and subsoil, gravelly beds, 20 feet thick.
2. Bracklesham beds of gravel, sand and clay, ordinarily 150 feet thick, but here only 80 feet
3. The Bagshot sands consists of sand, marl, silicious sandstone, about 120 feet in thickness, and are of marine origin.
4. London clay, a dark blue tenacious clay, containing calcareous material, gypsum, selenite, pyrites. This clay varies from 1000 to 100 in thickness, but at Haslar it is 90 feet only.
5. The Reading beds of plastic clay, called in this locality, Stamshaw clay, contain beds of rolled flints; its plastic character renders it useful for puddling. It is about 30 feet thick here.

This short account of the geological character of the hospital site is of importance as regards its water supply, which is from deep wells.

CHAPTER IV.

Construction of the Hospital.

THE three naval hospitals which were built in England about the same time were constructed on three different plans.

Plymouth hospital was built on the block system, and was the earliest specimen of a hospital in this country, with a limited number of patients in each block building. It was built by an architect named Rovehead, between the years 1756 and 1764, and was far in advance of its time.

Chatham Hospital was built on the Pavilion system. Each block or pavilion being in communication with the other, through a corridor.

Haslar Hospital was constructed on the Palatial style of architecture, without ornamentation.

It was built by Mr. John Turner, as architect, after the model of Greenwich Palace, which was designed for Charles II. by Inigo Jones.

The foundations were laid in 1746, and the building completed 16 years later, in 1762. The hospital was opened, however, for the reception of patients in 1754, the front line of buildings being then completed. The wings were afterwards added.

Before the wing buildings were completed, patients were accommodated in wooden sheds, which occupied the spaces afterwards utilised by the more substantial buildings. The sheds were not provided with beds and bedding, but hammocks were slung for the patients, who were chiefly the convalescents.

The building fronts the north-east ; the front being 567 feet long, and the receding wings 553 feet. The space occupied by the hospital buildings is about 7 acres.

It is very substantially built of red brick, made from the local clay, and has white stone facings. For many years Haslar hospital was the largest brick building in the kingdom, and for that reason was much noted.

The hospital, which occupies three sides of a quadrangle consists of a double row of buildings, one within the other. The double rows are constructed on a modified block-system, communicating with each other at intervals as may be seen from the plan. The outside block is separated from the inside blocks by an interval of about 34 feet.

According to the original intention of the Architect, the hospital was to have been quadrangular in form, one side, however, the South-west, has been omitted, and with much advantage, as it allows free access of both sun and air.



The Architect's original design.

This vacant side of the square was afterwards filled up with lofty iron railings, (twelve feet in height,) having in the centre a gateway leading to the unpretentious little church of St. Luke's, built in 1762.

One was frequently asked the reason for these huge iron railings and gate. They were put up in 1796, by request of the Governor, in order to check the too frequent desertions which took place, at the same time the lower windows of the hospital were secured by heavy iron gratings, and the doors kept locked at night. This was the time when the press gang was in full force, when the Navy was recruited by force and by emptying the jails. To obtain a clear picture of the empressment and its atrocities, with the consequent

desertions, one must study naval history and the newspapers of that date, such as the old volumes of the "Times."

The iron railings were demolished in November 1905, and as a consequence the hospital has assumed an appearance less like that of a prison.

The walls of the hospital are of great thickness, and the foundations are of immense depth. In the lower story the walls are four feet thick, and decrease as they go up, to $1\frac{1}{2}$ feet in the attics. The cellars under the buildings are vast, and the groined arches over the cellars support a floor of brick and concrete.

There is no damp-proof course in the old walls, such as is now put into all modern buildings ; it had not been introduced when Haslar was erected.

The hospital buildings, as I have said, occupy about 7 acres ; the airing grounds,—so called because the convalescent patients are allowed to walk and "take the air" there,—comprise 33 acres, and are surrounded by a high brick wall, altogether, the enclosed land amounts to 46 acres. The Haslar-land proper is far more extensive, and extends over 95 acres, including the large field, now used as a recreation ground for the Hospital staff and submarines, and formerly by the St. Vincent boys.



Sculpture over main entrance.

The allegorical piece of sculpture over the main entrance was highly esteemed in the early days of the hospital. It was executed by a Mr. Pierce, in Portland stone. In the centre are the Royal Arms of George II. On the left a female figure represents navigation ; she leans on a rudder and pours oil on the wounds of a sailor. The north star above her head, and the compass at her feet. At the angle the stem of a ship, with shells, pearls, and zephyrs. On the right hand side, commerce is represented as sitting among bales and chests, distributing money, fruit, and flowers. At the angle a sailor in distress, and a bird bringing, what appears to be, the serpent of Esculapius in its beak. At the extreme angle Boreas, shells, and ornaments.

The hospital was originally constructed to take 1800 patients, with an air space of 600 cubic feet per head, but during the Crimean War there were as

many as 2,000 patients under treatment in the hospital at one time. At the present day it is arranged to accommodate 1,200 with 1,000 cubic feet per head, in the main wards, and 700 cubic feet in the attics and lobbies.

The colonnades beneath the wards, on the inner side of the buildings, have doors already fitted to them, and could be easily converted into wards in case of necessity.

Wards. There are 58 large wards each taking 14 patients.

Each of these large wards measures 60 feet in length by about 24 feet in breadth, and the height of those on the ground floor is 12 feet, the height of the wards on the 2nd floor is 11 feet, and on the 3rd floor 10 feet, while the attics are only 7 feet in height.

Each of these large wards was originally distinct and separate, but as each block had two wards on the same floor, placed end to end, and communicating with each other through a door, it was decided to remove the end partition and so convert the two into one ward, with a wide arch in the middle showing where the dividing partition had been. Each of these double wards has a staircase at either end communicating with the wards by a door. The water-closets are in the centre, and have two doors, one leading out from each ward. When we refer to a ward, it may be taken in the sense of the old construction, as consisting of a single ward with 14 beds.

The wards, and in fact the whole interior of the hospital, have been renovated and improved from time to time, so as to bring them up to date. This renewal has been going on for years, and is still proceeding. The interior of each block is demolished, except the attics, and reconstructed on the latest hygienic principles.

The floors are fire proof, or what is called "fire-resisting"; they are constructed on iron girders filled up with a cement made of coke breeze and broken brick, with a finer cement on top, on which is placed the teak floors. The planks of the floors are fastened with hidden nails, each plank overlapping the other; the seams very close, and the wood highly polished.

There are no sharp angles or corners for the dust to collect, the walls by the windows and doors being rounded and smooth; there are no ledges by the doors or windows, which are made as plain as possible. The walls and ceilings are plastered with a hard mortar or cement, called "Serapite," and painted with an enamel paint called "Rapolin," the walls in a light green, with a dado of a darker shade, the ceilings white.

The skirting is teak, concave with a radius of 3 inches, flush with the floor and wall; the junction of the wall with the ceiling has the same concave radius. All the corners are rounded and concave in like fashion.

At one end of the double ward is the nurse's cabin, with a convex window projecting into it, and overlooking the whole ward. At the other end are the scullery, bath-room, and lavatory, wash places for the toilet of the convalescent patients. The floor of these places is covered with a mosaic marbled cement, called Terrazzo, an Italian patent.

Dimensions and ventilation of the wards:—

The wards on the ground floor measure 60 ft. by 25 by 12, and contain 14 beds. This gives an air space of 1281 cubic feet per head, and a superficial area of 107 sq. feet per bed.

The ventilation is chiefly by natural means, windows and doors.

There are 5 windows on one side of the ward, and from two to four on the other. The windows are 3 ft. 9 inches \times 6 ft. 2 inches on the ground floor, but decrease in size as one ascends to the upper floor. The windows have the usual sliding sashes, but the sill board is very deep, which allows the lower sash to be raised two or three inches, and thus gives a space between the upper and lower sash, which allows the air to enter with an upward current and thereby avoids draughts on the patients. The windows of the south-west block open inwards on hinges, and have geared hopper-sashes over for ventilation, when the lower parts are closed.

There are six Sherringham valves in each ward, four on the outside wall and two on the inside; they measure 12 by 8 inches and are placed high above the heads of the patients. They are usually open but can be closed by a balance weight, they slope upwards and inwards when open, the outside opening being guarded by a grating of perforated brick. Air passing through these valves is directed upwards towards the ceiling.

These natural means of ventilation are supplemented during the winter months by artificial ventilation from Galton's Grates or Shorland's Manchester Stoves. The principle is the same in both, fresh air is led from outside under the floor to a hot air chamber behind the fire, where it is warmed and ascending, pours out from the sides of the fireplace into the ward. The grates or stoves are open, and placed well into the ward, about 2 feet from the wall.

The smoke escapes by a horizontal flue from the back, and then into the ascending chimney.

The outlet ventilators include Arnott's valve, one in each ward.

This valve formerly opened into the chimney, near the ceiling, allowing the air to escape, but preventing the reflux of smoke.

It was not always effectual, as smoke and soot occasionally entered the ward. These valves now open into a hot air channel alongside the smoke flue, and act more effectually than the old method. Beside

these, there are four Boyle's silk-flap extract ventilators measuring 12 by 8 inches two on each side wall, near the ceiling.

Wards on the 1st floor are similar to the wards on the ground floor, but they do not provide quite as much cubic space for each patient, as the ceiling is 11 feet in height instead of 12 feet.

Wards on the 2nd floor are the same as the lower wards, but the ceilings are 10 feet in height, and the windows are decreased in proportion. The ventilation and heating are the same in all the wards. The nurses' cabins, the bath rooms, lavatories and sanitary arrangements are precisely the same on all the floors.

The artificial lighting of the wards was changed from gas to electric light in 1905. In each ward there are three fixed lamps from the ceiling, of 16 candle power, each, with a green shaded light in the centre between the two wards. This green light is turned on when the other lights are extinguished, it gives a soft subdued light which does not interfere with the sleepers, and yet enables the nurses to see their way about the ward. There are also movable lamps, with wandering leads fixed between the beds, four on each side: these are only lighted when required.

The Attic wards. These measure 60 feet by 18 by 7. The number of patients in each of these wards ought not to exceed 7. This would give 1080 cubic feet space per patient.

The ventilation of the attics. Each ward has six air trunks, 12 inches by 3 inches brought from the outside walls, and ascending up the inside of the roof for six feet, open into the ward by louvred openings. These are the inlet ventilators. The windows are provided with sliding sashes.

The outlet ventilators consist of two trunks, 1 foot 10 inches by 2 feet, going up from the centre of the ceiling to the roof, and ending in a ventilator resting on the ridge of the roof, with louvred sides.

There is also a Boyle's silk flap ventilator in the chimney breast of each ward.

There are other wards besides those mentioned the most recently constructed being a large ward on the 3rd floor, front centre block, over the arcade. It has not yet been occupied: it has three front windows and two end windows, 5 sherringham valves for fresh air, and two stoves. The extract ventilation consists of two trunks 2 ft. square, leading from the ceiling to the roof of the hospital. A new material called "Mack" has been employed in making the partitions of this ward; it is light and appears to consist of a large amount of plaster of Paris.

There are also numerous cabins, or small rooms, scattered throughout the hospital. These are now available for the treatment of patients, either serious cases, or those requiring isolation. These cabins were formerly used for the treatment of Officer patients, but since the opening of the new Officers' block in 1904, they have been mostly unoccupied.

CHAPTER V.

The Sewerage of the Hospital.

THE sewerage system was reconstructed in 1885. The old sewer was retained for the storm water only, and empties itself now, as it did formerly, into the mouth of Portsmouth harbour, through Haslar Creek.

The old sewer was a brick culvert 6 ft. 3 in. by 3 ft. 4 in. with a fall of 1 in. 260 ft. discharging 9 ft. 6 in. below H. W. S. T. Its invert, near the Chapel, being 1 ft. 6 in. below H. W. S. T. Several branches as full sized culverts ran to each wing. These culverts were ventilated by shafts 6 ft. by 1 ft. 6 in. carried up the wall behind each block of water-closets. The discharge pipes from the closets went through these air shafts. These culverts were all discontinued as sewers, in 1885, and along the floor of these old sewers was laid a 12 in. stoneware pipe. This pipe is simply laid along the floor, the size of the sewer remaining undiminished. This 12 in. stone-ware pipe takes, at the present day, the storm water from the Chapel and the storm water overflow from the under ground tanks. The pipes are provided with flap valves at their outer ends, and the main sewer with a Penstock valve.

Two new sewers were laid in 1885, one for the general hospital, and the other for the south-west block of buildings, which was then used as a zymotic hospital. The main sewer is a stone-ware pipe, not brick like the old one, of 12 in. diameter with a gradient of from 1 in 100 to 1 in 244. It formerly emptied directly into the sea between Fort Blockhouse and Haslar. The gradient is small, but being a large pipe it gives a rate of flow about 3 ft. 6 in. per second. The new sewer is placed at a higher level than the old, and takes the sewage, bath, and sink water. The sewer is provided with inspection chambers, one in every 50 yards for direct ventilation and examination of the sewer. These are covered with cast iron gratings. The sewers are flushed once a week by a hose from the hydrant, flushing is usually not necessary in a drain, but at Haslar, it is used owing to the different levels of the sewer.

The new sewer runs between the two rows of buildings in the wings, picking up the connections with the different closets. The pipes from the wings meet in the quadrangle, and pass out through the centre arcade alongside, and to the right of the old culvert, outside the main gates, the new sewer receives the drainage from the dispensary, laundry, and residences on the north side, it then runs diagonally across the recreation field to the sea-wall, receiving on the way the drainage from the Police quarters, and from the residences and cottages on the south side.

Before the new pipe leaves the old sewer, it has a 6 in. overflow into it, which would be used in emergencies.

The sewer from the south-west block is a 9 in. pipe, and quite distinct from the sewer of the general hospital; it emptied directly into the sea towards Spithead. Both this pipe and the one from the general hospital had their mouths below the lowest levels of spring tides, and each was fitted with a valve to prevent reflow of tidal waters.

The water-closets are numerous throughout the hospital, there is one for each ward, and they are separated entirely from the main building, being built in turrets, arranged in tiers, according to the different floors: each series is called a "turret block system." Each water-closet is disconnected from the ward to which it belongs by an anteroom ventilated by perfusion through windows on its opposite sides. There are windows also in each water-closet. The pans are not all the same pattern, many are Doulton's simplicitas flush out patent closets; the pans themselves are traps, the tanks are Purnell's patent waste preventer tanks. They contain three gallons which are discharge by one short pull of the chain: the action depending upon a syphon, with the bend above the top of the tank.

The soil pipes from the water-closets are made of lead, 4 in. in diameter. A stone ware Buchan's

disconnecting air trap is fitted at the foot of all soil pipes, at their connection with the drain, all soil pipes are carried up full bore by an iron pipe above the building for ventilation purposes.

The drainage of the Nursing Sisters' quarters is on the separate system. The sewage is led direct from the quarters by two pipes of 4 in. and 6 in. into the drain from the south-west block (old zymotic block). The storm water is collected, and runs by a 4 in. pipe into the rain water tank, in the south-west corner of the Quadrangle.

The Medical Officers' Mess is also on the separate system. The sewage is conducted along a 6 in. pipe, under the covered way, and is joined opposite the Nursing Sisters' Mess, by a 4 in. pipe from that building. The pipe then empties into the 9 in. pipe from the South-west block.

The storm water runs with that from the Sisters' quarters into the rain water tank in the south-west corner of the quadrangle. The Terrace sewerage system was reconstructed during the summer of 1904.

In the old system the storm water, sink water, and bath water went directly under each house from front to back to open into the old brick drain, 4 ft. by 2 ft. 6 in., which ran the whole length of the Terrace behind the houses. The soil pipes joined this drain from the back of the houses. The new system has abolished the pipes under the houses. The storm and

sink waters are collected by a 6 in. pipe in front, and crosses the stable yard in the southern end of the Terrace, to empty into the man-hole, in the Paddock, of the main drain.

The sewage pipe is 9 in. in diameter and runs the length of the Terrace behind, through the gardens and across the Paddock to join the Gosport sewage system. Each soil pipe is trapped and ventilated by a 4 in. pipe going up to the roof of the house. The connecting drain in each courtyard is also trapped, and ventilated by a man-hole.

The old brick culvert running behind the Terrace has been filled up, but that part through the Paddock emptying into the sea has been allowed to remain intact, and can be used in case of emergency, by a valve in the man-hole of the new drain. The whole drainage of Haslar was connected to the Gosport system in 1905, by an intercepting drain, which is laid along the sea-wall and picks up each drain before it enters the sea. This intercepting drain opens into the Gosport system near the Military Hospital.

The "Sullage," the refuse from the wards, is divided into three kinds :—(1) The ashes and dust are deposited in the metal sanitary dust bins, one to each ward, which are emptied every morning before 9 o'clock into the dust cart. (2) Scraps of paper, soiled dressings and bandages are removed to the incinerator, near the north-west block, and burned. (3) Scraps of food, bones and other organic refuse are removed after each meal, and emptied into a trough, which is cleared out daily by a cart from outside.

CHAPTER VI.

The Water Supply.

THE water supply for the hospital is derived from two deep wells in the Gunboat Yard, close to the hospital, and within a few feet of Haslar Road. The south well is the old well, and was sunk at the time the hospital was built. The south well is on a smaller scale in every way than the north well, it goes down to a depth of 146 feet to the first water bearing stratum of sand. The well is lined with a cast iron cylinder 6 feet 10 inches in diameter. It still yields a fair supply of water.

We have a complaint at a very early date, 1759 from the plumber that he had great difficulty in procuring enough water from the well to supply the hospital. The pumping was done by contract, and the power was a four horse machine. The circle worn by the tread of the horses was only obliterated in 1905, when the electric light plant was erected in the building. The sides of the well were not lined with iron at first, as we find an account of the side caving in from the tramping of the horses. Horses continued to do the work until 1855 when a new steam engine was erected.

The north well was sunk in 1859 to a depth of 340 feet. It goes through the Bracklesham beds and other strata to the chalk. The shaft of the well is lined with a cylindrical shell of cast iron of 8 ft. in diameter, for a distance of 51 feet 6 inches from the surface. The bore pipe rises up the centre of the well to a height of 16 feet, through which the water overflows into the well itself.

The bore pipe, or what is called the old bore, has a diameter of 16 inches, and at a distance of 138 feet from the surface meets the first water. Apparently the old bore pipe stopped here, but in 1859 the new bore pipe of 12 inches diameter was sunk to a depth of 330 feet, and the boring to a further 10 feet, making a total of 340. Water was found at various depths, first at 138 feet; then a spring was encountered at 212 feet; water strata at 316 and 340 feet.

The lower 29 feet of the bore tube is perforated every 3 or 4 inches.

The tube was tested in 1885 and found to be clear for 300 feet, the lower part was reported to be silted up.

This well from the surface passes through 2 feet 6 inches of mould and 2 feet of clay, then 18 feet of gravel. At the depth of 33 feet it pierces 2 feet of rock, the only rock met with in its whole depth, layers of sand and clay, some of them water bearing, of varying thicknesses and formation, extend to the end of the boring.

The advantage of having two wells is obvious, when one well or pump is under repair, the other can supply the hospital.

From the wells the water is pumped by the engine, which also drives the laundry machinery, into two large iron tanks at the top of the water tower.

Each tank holds 125 tons of water or 50,000 gallons. The water tower itself is 120 feet high, and forms a conspicuous land mark for many miles around. It was built in 1885.

The tanks in the water tower are 75 feet above the level of the ground, and as they are ten feet deep, a full head of water of 85 feet can be obtained, so that the hydrant can force water over any building in Haslar. The tops of these tanks are open to the air, and therefore have the advantage of æration. From these two tanks the water is carried all over the hospital.

The mains also supply a large tank above the laundry, for use of that establishment; it contains 230 tons, and is 23 feet above the ground level; and would be available in the case of fire.

Besides this reserve of water in case of fire, there are the old water tanks which are supplied by the storm water from the roofs of the hospital and residential houses. There are ten tanks underground in the quadrangle and airing grounds made of brick, each having a capacity of 43 tons, four tanks

underground in the Terrace, with a capacity of 150 tons, and two near the main gates.

These underground tanks hold a reserve of about 630 tons of water. The water in these tanks is supposed to have been used for various domestic purposes, but it was a water liable to contamination from vegetable and other refuse washed from the roof of the houses, and the overflow from these tanks being into the main sewer, not only could sewer air gain access, but rats also from the main drain.

Then there is also a large reservoir in the Gunboat Yard, which was at one time supplied from Haslar Mains, but is now in connection with the Gosport water supply. This reservoir which is really a small artificial lake, used as an experimental pond in which the models of newly designed ships are tested to ascertain their stability and sea-worthiness, contains 3,375 tons of water. This water could be pumped through the mains into the water tower and so become available for fire, but as it is more or less impure, and would contaminate the Haslar water by being pumped into the mains, the stationary fire engine can pump the Gosport water direct into the mains without going through the experimental tank.

The storage of water at Haslar exceeds 1000 tons, besides being now in direct connection with the Gosport water supply.

The Haslar water is a good water for drinking and other domestic purposes, although it is very hard, and contains much sodium chloride, and ammonia.

In the early days of the hospital the deep well water was supplemented by numerous shallow wells. The water from the shallow wells was very hard and brackish, and interfered with the laundry work. It was therefore suggested to the Governor by a "wise man in Gosport," 1796, to sink the wash-house well deeper; this was done, and the report says that excellent water was found at a depth of 30 feet.

Shallow wells of 20 feet depth are scattered over the grounds of Haslar, but are now disused.

The quantity of water consumed in Haslar hospital slightly exceeds on an average 51 gallons per head, daily.

CHAPTER VII.

Lighting of the Hospital.

THE hospital, including the Official residences, is now lighted by electricity. The electric light was installed in 1905. Previous to this date, the lighting was by gas from the Gosport Gas Company. The electric plant is erected in the Gunboat yard, close to the north and south wells, and in fact, as already mentioned, placed on the site of the old horse machine, which was used for pumping water from the well.

The number of lamps in the hospital is between 3,000 and 4,000; their distribution in the wards has already been referred to, in speaking of the construction and lighting of the wards.

There are three dynamos, each capable, at 450 revolutions, of producing 435 amperes at 250 volts. There are large stowage batteries consisting of 120 cells, with 700 ampere hours capacity, i.e. the battery can supply the hospital with 100 amperes for 7 hours. These batteries are for supplying light and power when the dynamos are not running, as on Sundays, etc.

Besides light, these machines supply motors for all the laundry machines, and within the last few weeks motors have been erected for pumping water from the wells. The steam engine, that formerly supplied the power to the laundry machines and pumped the water, is no longer used, being superseded by electro-motors.

CHAPTER VIII.

The New Zymotic Hospital.

THE zymotic hospital is built to the south of the general hospital, close to the sea-wall, and over looking Spithead. Erected in 1899, it was occupied 3 years later, in February 1902.

It is built on the separate block or pavilion system, each block being separate and independent. There are four blocks of two stories each, with the administration buildings in the centre, two blocks being on each side

There is a covered way running the whole length of the hospital, but open at the sides, by which one can reach the wards of the different blocks or the administrative buildings without being exposed to the wet in bad weather.

Each block consists of two floors, a lower and an upper, and each is an exact counterpart of the other, being separate and quite independent. The stair, which goes from the covered way to the upper floor, is not at all in connection with the lower floor, but

ascends in a separate building open to the air on all sides, and leading to the ward by a passage, open at the sides.

The small building containing the stair has also the W.C. for the Nurse attached to the floor, and the coal store for each, while in the cellar under the stair is a boiler for supplying hot water to both floors, for baths, etc.

The ward blocks lie parallel to each other, the ends of entrance and covered way being towards the north-west.

On entering the building proper, either upper or lower floor, we find first a linen store on the left, followed by a ward kitchen, pantry and scullery, then the nurses cabin with a window looking into the ward. On the opposite side are two cabins for Officers, bath room and lavatory, in an annex, with cross ventilation separating them from the cabins. The Officer's cabin Measures 12 ft. 5½ in., by 12 ft. 10 in., height 13 ft. which gives floor space of above 170 ft. and a cubic space of over 2,200 ft. Warm air enters the Officers' cabins from two louvered openings above the mantelpiece. The fresh air is admitted from the outside to a space behind the fireplace, from whence it ascends warmed, to heat and ventilate the room.

The vitiated air escapes by an Arnott's valve near the ceiling.

We now enter the ward by spring doors, the length of the ward is 61 ft. 10 in., breadth 25 ft. 8 in., and height 13 ft. The number of beds is 10, this gives a floor space for each bed of over 158 ft. and a cubic capacity of 2063 ft. for each patient.

In the centre of each ward is a double Boyd's stove, placed back to back. Fresh air is admitted from outside through a grating in the wall, along a trunk under the floor and enters the air chamber of the stove underneath. This air becomes heated by the fires and escapes into the ward through openings in the front and sides of the stove. The smoke and hot gases of combustion curve down to the bottom of the grate and escape along a channel on the other side of the floor, to the outside wall, where they ascend through a chimney.

The floor is laid with teak, and the boards are joined with Marine glue; over the fresh air trunk to the stove, and the smoke flue from the fires the flooring is Terrazzo.

There are 10 windows, five on each side opposite each other, over each window is a moveable hopper sash, for ventilation. The entrance doors have likewise hopper frames at the top. At the other end of the ward are two windows, with hopper sashes above, and also a door opening on a verandah, which thus faces the south-east.

In the south-east end of the ward, left corner, is a door leading to an annex, containing W.C., sink,

and urinal, separate from the ward by a lobby with cross ventilation from windows. The right corner leads to an annex containing bath room, and lavatory. The lobby to the bath room has egress on to an iron stair, which is only to be used in case of fire.

Ventilation. Besides the hopped sashes over windows and doors, and the warmed air from the stoves, there are four grated openings on each side of the ward, as extract ventilators, communicating with the outside, through a trunk running up the outside wall, similar to chimneys. The grated openings can be closed or partly closed, by patent gearing. (Clement Jeake's patent) size of opening 17 in. by 7 in. There are also four grated openings 9 in. by 6 in. near the floor on each side, which acts as ingress openings for fresh air.

The ventilation of the wards is excellent. The only complaint one hears, is that there is rather too much, especially in stormy weather; during winter.

The walls are plastered on the interior, with a hard plaster, and painted with Cayley's enamelled paint, this has not been found so good as "Rapolin" used in the general hospital.

The administration buildings contain a Medical Officer's sitting room, bed room, and office. Also office for Ward master, bed room, etc.

It also has a dormitory for a labourer, and sick berth steward, and a runner.

It also contains Nursing Sisters quarters, consisting of sitting room and 3 bed rooms. Kitchen and servant's bed room, besides bath rooms and lavatories. Also Dispensary

Opposite the administration block is the kitchen, with the cook's bed room, lavatory etc. store rooms.

Steam is mostly used for cooking, but coal in an open range can also be used.

A sick-berth attendant is employed to carry the food from the kitchen to the various nurses, in the various blocks. He acts as a medium between the nurses of the wards and the different offices inside the zymotic hospital, and is called the "runner."

The "discharge block" is near the main gate opening on the sea wall. It contains the Porter's lodge, also (1) a room for the patients disrobing, and in which they leave their clothes, (2) a bath room, and (3) a room for the patients dressing in their own uniform, and then going out.

There are buildings detached from the hospital, used for various purposes. A house containing steeping tanks, 5 tanks of 100 gallons each, where clothes soiled by Enteric fever patients, are steeped for 24 hours in carbolic solution 1 in 40, before being disinfected.

A Disinfector. Lyon's patent disinfector. With a pressure of 15 lbs of steam in the jacket, and

10 lb. in the chamber, there will be a temperature of 240° Fah. Clothes and bedding are subjected to this temperature for 20 minutes or half hour according to the thickness of the material. The soiled articles are brought to the disinfector in a yellow barrow for disinfection, and removed in a red barrow. These barrows are used for no other purpose. There is an Incinerator, (Sargeant's Incinerator) in which all refuse is burned.

The raw foods, meat, milk, vegetables, &c., are introduced from the general hospital through a small hatch in the wall opposite the kitchen.

The drainage is on the separate system. Originally there was only one system, and the sewage drains carried the surface water as well, but during the spring of 1904, the surface drainage was disconnected from the foul drainage, and led into the existing outfall, just beyond the man-hole, in the road on the sea wall. The surface water therefore is discharged into the sea, through the pipe outfall formerly used as a foul outfall. The foul drainage leaves the outfall pipe at the man-hole on the sea wall, and is conducted into the Gosport system of sewers.

CHAPTER IX.

The New Officers' Block.

THIS building which was completed in May, 1904, is situated in the North-east part of the ground, opposite the Surgeons' Mess.

The building is for sick Officers, both Surgical and Medical. It consists of one long block running South-west and North-east, with the front to the South-east.

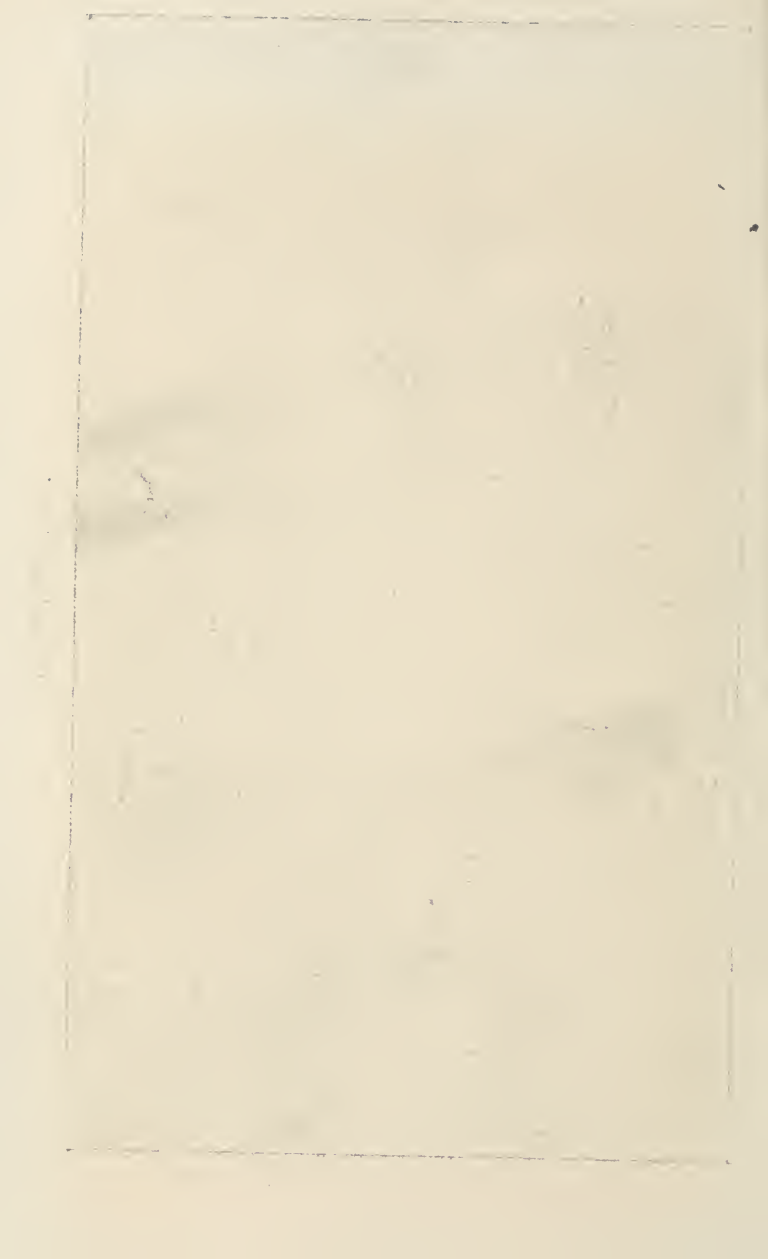
The front entrance is situated in the middle of the building, and leads into a long corridor, which runs up the centre of the block with a door at each end, and rooms on either side.

The length of the building is 200 feet, 8 inches and the width 40 ft. 2 inches. On each side of the main entrance are the Ward-masters' store-rooms, and then two day rooms, one on each side, measuring 19 ft. 6 inches, \times 15 ft., with a cubic capacity of 3,510 ft.

Then come the bedrooms, eight in the front, four on each side of the main entrance, and 6 in the back, a total of 14 on the ground floor. Each bedroom



Officer Patients' Block.



measures 13 ft. \times 15 ft, and has therefore 195 ft. superficial area, and a cubic capacity of 2,340 ft, (height being 12 feet.)

The main entrance crosses the corridor, which is 6ft, wide, and continues into a lobby, which again leads through a covered way into the kitchen block. On the right of the lobby, in the back, is the Medical duty room, then the stair and the lift, capable of lifting up patients in a cot. On the other side of the lobby are the senior Ward-masters room and attendants room.

At each end are the W.C's, lavatories, bath-room, coals, and stair for servants or attendants. There are therefore four water-closets and two sink-rooms or lavatories, on the ground floor, also two bath-rooms, one 11 by 15' and the other 7' 5" by 15'.

Each cabin or bed-room has a window, 4' with a hopper frame above. Also a hopper frame above the door, both hoppers being worked by gearing. The bed-rooms have each a Shorland's stove.

The fresh air is led in from outside and is warmed by the stove, and after being heated ascends and pours into the room through two circular louvred openings above the mantle-piece. There is also an egress for the foul air near the ceiling. An Arnott's valve, closed by an aluminium cup valve to prevent reflux of air into the room.

This exhaust opens into a separate flue alongside the smoke flue.

The First Floor.

The arrangements and number of the bed rooms are identical with those on the ground floor, except that the front end room (North west end) is converted into a Sisters' room, and has a water-closet leading from it.

The water-closets, lavatories, and bath rooms are also similar. There are two day rooms, corresponding with those on the ground floor. Between the day rooms, and situated over the main entrance is a room for attendants. Cubic capacity 1760 ft.

Opposite the attendants' room across the corridor, and above the lobby on the ground floor is the operating room. This room is lighted from above as well as from the side.

The superficial space in the cabins is the same on this floor as on the ground floor, but the cubic capacity is slightly less, viz. 2,145 c. ft. as the height of the ceiling is 11 ft. instead of 12 ft. as on the ground floor. The stoves and ventilation are the same. The floors are of teak, polished, and fastened with hidden nails. The corridors, entrance, and lobby, are covered with Terrazzo, so likewise are the bath rooms, lavatories, and water-closets.

On the first floor, besides the corridors, bath rooms and lavatories, the operating room has Terrazzo flooring.

There is a covered balcony at each end, and an open balcony leading from the day rooms over the front porch.

The heating of the building is by Shorland's stoves, as just mentioned, and also by hot water pipes. The hot water heating apparatus is in the cellar, under the lobby, at the back, with a cistern in the roof. Heat radiators are placed along the corridors, 5 on the ground floor, and 4 on the first floor; one in each bath room and also in the passages leading to the water-closets. The operating room has also radiators. The heating apparatus is of the low pressure circulating system. There is a hot water supply independent of the heating system.

The lighting is by electricity.

The kitchens are in an independent and separate building, and only connected with the main building by means of a covered passage.

The kitchen block contains kitchen, scullery, larders, Cook's room, W.C's. etc. The walls of the kitchen are of glazed brick, and the floor concrete.

The sewerage is on the separate system. The surface drainage is led away through a 6 in. pipe to the rain water tank, in the quadrangle, where it is connected with the old sewer.

The foul sewage leaves the building at the north-west corner, by a 9 in. pipe, and goes straight towards Haslar Road, where it joins the Gosport drainage system.

CHAPTER X.

The internal arrangements of the Hospital.

THE arrangement of the wards in Haslar has long been looked upon as intricate and confusing, but it is so, only to those with a superficial acquaintance with the hospital. With a little thought it will be seen that the structural and administrative arrangements are simple and convenient.

The hospital is divided into four sections, two medical and two surgical, with a principal Medical Officer in charge of each section, and surgeons under him. The Surgical sections are on one side of the hospital, the medical on the other. The senior sections of both sides occupy the outer block of buildings, the junior sections the inner wards overlooking the quadrangle.

The wards are numbered, and many of them named after famous Naval Commanders: the even numbers are on the surgical side, the odd numbers medical.

The central block of the hospital, on the ground floor, contains the Inspector General's office, Secretary's office, and other clerical staff; on the other side of the Arcade, the Survey Room, where all surveys on patients are held; in this room is a large painted coat-of-arms of Queen Anne, dated 1706, but there is nothing to show how it came into the possession of the hospital.

The Receiving-Room also opens out of the Arcade. This is one of the latest reconstructed buildings in the hospital, 1905. It consists of a large waiting-room, with a room leading from it for the Medical Officer, and for the examination of the patients. There is also a room for the reception of Officer patients. Here large baths are provided; furnished with hot and cold water, each bath being in a separate cubicle; three baths are reserved for venereal patients: three baths for the sick Berth-Staff: one for the Police; and one kept in reserve. There is also a bath for Officers, water-closets &c. The whole is heated by hot water pipes and radiators.

An electric lift goes from the Arcade to the top of the hospital. On the first floor, we have overlooking the quadrangle, the operating-rooms, there are two, known as the Major and Minor Operating-rooms.

The operating-rooms. Haslar had the proud distinction of possessing the first operating-room of all the Naval Hospitals. Operations, before the institution of these special apartments, were performed in

the wards in the presence of the other patients. Haslar had thus a great advantage in Surgery, as was pointed out at the time.

The establishment of an operation room is due to the initiative of Mr. Robert Dods, Surgeon of the Hospital during the eighteenth century.

It was said, that the cries of the patients during the operations in the wards, "offended" the others.

The present operating-room was designed in 1897, and placed immediately over the central arcade. It has several times been renovated, and brought up to date in the newest sanitary and surgical appliances.

The minor operating-room adjoins the larger, and is likewise supplied with the latest improvements in operative surgery.

On the other side of the Major operating room is the Dental room. This has lately been fitted with electro mechanical apparatus. All these rooms are lighted by large windows, overlooking the quadrangle. There is also a dark room for ophthalmic work.

On the same floor, but on the other side of a square well, which goes from the arcade to the top of the hospital, are a store room for splints and dressings, an X ray-room, and an apartment for the "High frequency current," and other electrical appliances, with

a photographic dark room attached, an instrument room; an anaesthetizing room; and a sterilizing room. These rooms have only just been constructed, 1905.

The 2nd floor of the central block is occupied by the Sick Berth Staff; mess-room, and recreation rooms.

On the top floor is the hospital kitchen. This was constructed in 1887. The floor is tiled, and the cooking is done by gas and steam. The food is removed in large mess tins, each with a hot water compartment in the bottom for keeping the meals warm. The raw material is sent up to the kitchen by the electric lift, and the cooked food returned the same way.

The advantage of having the kitchen at the top of the building is the absence of all smell of cooking, which frequently, with the kitchen in other situations, pervades the wards, and is highly objectionable to the patients.

CHAPTER XI.

Official Residences.

IN March 1756, houses were ordered to be built for the Officers employed in the hospital, meanwhile the officials were to be lodged in the hospital. These houses, when finished, comprised the four residences, two on each side of the front line of the hospital, inhabited by Officers at the present day. We hear very few complaints concerning these houses, the only defect seemed to be smoky chimneys.

Dr. Trotter states that on 1st October, 1795, Earl Spencer accompanied by Lord H. Seymour, and Mr. Pybus, Lords of the Admiralty, surveyed Haslar hospital, and marked out the ground for erecting the houses for a Governor, Lieutenants, and other Officers, about to be added to the Institution. This was in consequence of a general inquiry by two Flag Officers and two Captains of the fleet, made in March, 1794.

The houses for the Governor, Lieutenants, and other Officers formed, what is now known as the "Terrace," and were erected in 1796-1798, on what had been the burial ground of the hospital. Numerous

skeletons have been exhumed from time to time in draining and other operations, even as late as 1904 skeletons were found embedded within a few feet of the Inspector General's front door.

We find the Governor and other Officers making numerous complaints in connection with their official residences.

The Governor reported that it was almost impossible to light a fire in the kitchen, owing to the chimney smoking, while cooking a piece of meat was out of the question. Various contrivances were fitted to the chimney, but as the Governor says, they seemed to make matters only worse. The Governor writing in November, 1799, says that the houses built for himself and other officers had been three and a half years in hand and were not yet finished. They were in a "shameful state." The window sashes were so badly glazed that the rain came through.

The glass was "Newcastle glass," instead of "London crown," and the delay in fitting it was owing to the time the glass was on passage from Newcastle: the panes being cut, were too small for the frames. "The roofs leaked, said to be due to the slates not overlapping enough. The drains are exceedingly offensive, as well as badly constructed, and being open drains the water which ought to pass through soaks into the earth." The Governor also condemns the locks to the doors, the leaking taps on the water pipes,

and various other fittings. He calls for a survey on the whole of the houses.

One of the Lieutenants sends a letter to the Admiralty complaining that his furniture was rotting from the admission of rain through the roof and windows, and he points out what a serious matter it is for a Naval Officer to lose his furniture. All these defects have been rectified long ago, so that the houses in the terrace, with their fittings, will compare favourably with a similar class of house outside the hospital walls.

The keeping of cows in the hospital. Before the houses in the terrace were occupied, the four principal resident Officers, with the Chaplain and Dispenser, had, by direction of the sick and wounded Board, been permitted to feed cattle in the following proportion, viz. two to each of the principal, and one to each of the other gentlemen, on the hospital airing and burying grounds.

As eight other officers became resident, by occupying the Terrace houses, the Governor requested their "Lordship's direction how that indulgence should now be appointed. It is supposed the land, which is about 23 acres, will maintain one cow to each and any proportion for myself their Lordships may do me the honour to think my situation may entitle me to keep." Their Lordships decided that each of the principal officers should have the privilege of keeping

one cow in the grounds belonging to the hospital, and the Governor two. This privilege of keeping cows was enjoyed by the residents in Haslar till quite recent years. When the keeping of cows was abolished, the residents received a yearly payment in lieu, but even this was stopped about 5 years ago, and any money that is derived from grazing, or from hay grown on the paddock and airing grounds, is devoted to the keeping up of the grounds, flowers, shrubs, etc.

In 1800, the Governor seems to have reached the lowest depth of despair as regards his house, "the house is constantly wet, and the servants' rooms streaming with rain." He plaintively requests that the Admiralty would stop Mr. Bunce, the Architect, from making "experiments which have been constantly tried, and as constantly failed to make my house habitable."

CHAPTER XII.

Detached buildings



Surgeons' Quarters.

The Medical Officers Mess. The Junior Medical Officers were formerly lodged, and had their Mess, in the general hospital building, at the south end of the front block, where the present Storekeeper and Cashier's office is now.

The present new block of building for Medical Officers was opened in February, 1901. It is a handsome building, and like all the other parts of the hospital is built of brick with stone facings. On the ground floor are the usual Reading, Music, Billiard, and other rooms, with a large dining room capable of seating comfortably between 40 and 50 Officers. Upstairs are the bed-rooms, 25 in all, nineteen small and six large.

The Nursing Sisters' Mess. The Sisters, like the Medical Officers, were at first accommodated in the general hospital, occupying the upper floor of the south-east corner block. The present mess is built on the same style as the Medical Officer's Mess. It faces the south-east, while the Medical Mess faces the south-west. The mess was opened in June, 1901, and contains, on the ground floor, rooms similar to the Medical Mess, but smaller. Upstairs are the bed rooms, bath rooms, etc. There are 21 bed rooms, besides accommodation for five servant maids.

The Laboratory. The Laboratory was opened and used for the first time in 1899. Before this date, the ground floor, of what is now the Lunatic wards, was used as a Laboratory. The new building is the only one in Haslar which does not harmonize as regards orientation with the general hospital. It fronts the north, with large plate glass windows, so as to get a good light for microscopic work. The interior is divided into two parts, a private apartment for the

Bacteriologist, and the larger part, where instruction is given in Microbiology, and analyses of water, milk, and the various beverages, and foods in use in the Navy. For instructional purposes, accommodation is provided for 13 or 14 Officers for work with the Microscope, and for about 16 for analytical work, while a table with Microscope and Reagents is reserved for use of the ward Officers only. The Laboratory is also fitted with the latest appliances and apparatus for scientific work. The cellars underneath contain a photographic dark room, sterilizers, etc.

The Laundry. The Laundry is a most important accessory to the hospital. In the olden days the washing was done by women, by hand, seamstresses were also employed to repair and make articles of apparel. We read of the Matron being engaged making night caps for the patients.

The water for the wash-house was at first taken from a shallow well, but as this was very hard and brackish it proved most unsuitable for washing. As we have seen in speaking of the water supply, on the advice of a "wise-man" a deeper well was sunk, with satisfactory results.

The present Laundry. All the washing is done by machinery. The linen is washed in cylindrical revolving tubs in which hot water and a certain proportion of soap is introduced. The flannel articles are washed separately. From the dash tubs the

clothes are put into centrifugal ringers which revolve at a speed of 500 or 600 revolutions per minute, and so remove the water by centrifugal force. From these ringers the things are put on racks in the drying rooms.

These rooms are supplied with heated air sent into them by Blackman's fans. The air in its transit to the drying rooms is made to pass through a collection of tubes contained in a jacket, and has steam circulating all round them. There are four Blackman's fans and by mixing the air practically any temperature can be obtained in the drying rooms. Not only is the air heated in the drying rooms, but a strong current is kept up. In the drying rooms for linen a temperature of about 150° is maintained, but for flannels one of about 75° only is kept up.

The steam for the purpose of heating the air, is derived from the same engine which pumps the water to the top of the tower, and which also supplied the motive power for all the laundry machines, including a steam mangle. The hot water is heated by the condenser of the engine, and is kept stored in a tank above the laundry.

The motive power for all the laundry machinery has just been altered (1906), from steam to electro-motors; and it is reported, with satisfactory results, as the motion is smoother and more regular.

There is a Thresh's disinfector in connection with the laundry. This is a non-pressure steam

disinfecter, the steam never accumulating at a greater pressure than that of the external atmosphere. The steam is given off from a solution of calcium chloride, which boils at 220° Fah. The articles after disinfection are dried with a hot air current through the chamber.

Labourer's Hall. This is a building about three years old. It consists of a square room with table, chairs, cupboards, and a cooking range. Here the labourer employed in the hospital, can cook his meals, or warm up his already prepared food.

Over the hall is a dormitory with eight beds, but there are only two labourers on duty during the night.

Instruction room for the Sick Berth Staff. This is a large room adjoining the Labourers' Hall. The Probationary Sick Berth Attendants undergoing instruction vary from 30 to 130.

This room is also used, during the winter months, for theatrical and musical entertainments for the convalescent patients.

The Mortuary, Post-mortem room, Dispensary, and Victualling room, require no description.

The following is an average daily issue of the principal items of food from the victualling room, in the month of June, 1906.

Beef 350 lbs.

Butter 60 lbs.

Mutton 250 lbs.

Milk 1100 pints.

Fowls 50	Eggs 1300
Bread 600 lbs.	Greens 200 lbs.
Fish 25 lbs.	Potatoes 300 lbs.
Soles 5 lbs.	Cocoatina 5 lbs.

Besides tea, sugar, and various foods, popularly known as medical comforts.

Fruit. Oranges 100, daily. Bananas about 150, daily. Lemons 24, daily.

BEVERAGES.

Port wine 7 to 10 gallons, weekly. Whisky 2 gallons per week. Sherry 1 gallon per week. Brandy 1 gallon per week. Stout 550 bottles per week.

Lemonade and Soda water about 150 syphons, daily.

Water consumption about 51,000 gallons, daily, 255 tons, a little over 51 gallons, per head, per diem, for the number of inhabitants within the walls of Haslar.

The long storerooms on each side of the Main Gates, are only worthy of notice because they could be converted into wards for the treatment of patients in an emergency, temporary sheds could be put up for the stores.

CHAPTER XIII.

Medical Library at Haslar.

DR. Trotter, towards the end of the eighteenth century, advocated the establishment of a library for books on medicine and its collateral sciences. He says the "books that every Physician and Surgeon must peruse in order that his knowledge may keep pace with the improvements of his profession, are not only numerous but expensive: a great part of them are beyond the reach of an individual: and besides the apartments allotted for these Officers in a ship, put it out of their power to carry any considerable quantity with them." He suggested that the Admiralty should grant £40 per annum, with the house provisions and a cabin, to some person as keeper.

He also suggested "the physicians to the fleets, physicians and surgeons of hospitals, and surgeons of the Navy, shall allow the sum of five shillings when actually employed, out of their annual pay, for the purchase of books; and only these gentlemen shall have admission to the library."

It was not until many years had elapsed after this proposal, that a library was established and founded through the unremitting labours of Dr. Burnett, while Commissioner of the Victualling Board. Sir William Burnett was appointed Physician in 1810, and Commissioner in 1822.

The first Librarian was Dr. Scott, one of the Medical Staff of the hospital, He took over the duties on 18th June, 1827. He had other duties to perform besides those of looking after the books in the Library, he was instructed to give a course of lectures twice a year, in the practice of medicine and surgery. He was also Curator of the Museum.

The Library contains about 6000 volumes, besides pamphlets, about 400. Although works on Medicine and Surgery are the more numerous, yet there are many books on collateral subjects, more especially in Botany and Zoology, voyages and travels.

There are about 230 works over a hundred years old, many of these old books were sent to a meeting of the British Medical Association, which was held in Portsmouth, in August, 1899, as a sample of what a medical library would be over a hundred years ago. Many of these volumes date back to the sixteenth century.

Albinus' anatomy (1749) is a very fine work ; the plates are considered by many to be the best anatomical plates ever executed.

There is a curious English translation of Ambroise Paré's works, (1678), also the Chirurgical treatises by Wiseman, 1686, 1719. Probably the finest book in the library is an Arabic work, said to be the Koran. It has a curious and valuable binding, and is richly illuminated.

Then the library contains all the classical works of the ancient writers, such as Hippocrates, (*Medicorium Omnium*) 1554 and 1662. Galeni opera, in three large volumes, 1562. Hoffinani Opera Omnia, in six ponderous volumes, 1748, and numerous other famous authors of a bygone age.

The Library is particularly rich, as may be supposed, in the works of Naval Medical Authors, such as Lind, Blane, Trotter, Turnbull and others.

The Library has complete records of many of the periodicals of medical literature, such as, The Edinburgh Medical Journal, from its commencement in 1805. The London Medical Gazette, The Medico-Chirurgical Review, Medical Times, Lancet, British Medical Journal, and the larger monthly Medical journals.

The Library is increasing by the addition of between 70 and 90 volumes yearly.

These books are not subscribed for by the Medical Officers of the Navy as suggested by Doctor Trotter, but are generously granted by the Admiralty, on a requisition being made by a Medical Officer for any particular book or books bearing on the subject of his profession.

The Admiralty likewise provide all the current medical papers and journals, as well as a Librarian to take charge of them.

Besides the medical library, there is a library in the northern end of the front block, for use of the patients. This library is also maintained by the Admiralty, and possesses about 1000 volumes.

The reading-room receives nine daily papers, all the better class of illustrated weekly papers, and about 10 magazines, monthly.

Museum.

We are indebted to the exertions made by Sir William Burnett while Commissioner of the Victualling Board in 1822, for the establishment of the museum as well as the library. The keys of the museum and library were handed over to Dr. Scott, on 18th June, 1827.

The museum at first consisted of two rooms, one on the ground floor and one above. The museum is situated on the inner wing of the south side of the hospital square, near the centre.

On 26th June, Dr. Scott began to remove the specimens from the cupboards in the hospital wards, in which they had been deposited, to the museum, which smelt so strongly of turpentine that it would have been improper to have sooner commenced the work.

In the earlier years of the museum, large quantities of skins of mammals and birds, as well as geological, botanical, and other specimens, were received through the victualling Office.

In 1828 a number of pathological and other specimens, were received from Malta, also in 1835, some came from Melville hospital, Chatham; and from Greenwich hospital in 1846.

Another room was added in 1840; and in 1850, Mr. Barron was appointed Curator, which appointment he held until 1884. From this date until the appointment of Fleet Surgeon Bassett-Smith, in 1900, very little was done in the museum.

The Museum as may be readily surmised from its intimate connection with the Navy, contains a large and varied collection of specimens from all parts of the world, zoological, botanical, geological, and a miscellaneous collection of weapons, and objects of curiosity. There is also a good and rapidly increasing collection of pathological specimens.

The total number of specimens catalogued in the museum, amounts to 11,585, but this by no means accounts for all the objects in the museum, as neither the pathological nor the entomological specimens are yet catalogued.

In 1903, a much needed additional room was added for the anatomical and pathological specimens.

It is difficult to select any one group of objects as being specially representative or specially interesting, but there is a very good representative collection of human skulls from widely divided parts of the globe, also some fine tattooed heads from New Zealand.

The Hon. Court of Directors of the East India Company presented a fine collection of coloured casts of fossil remains of vertebrata, from the Sewalik Hills, India.

There is a fine collection of marine fossils, presented by P. C. Sutherland, Esq.

Then there is the Challenger collection made by Dr. A. Crosbie, in 1876.

The late Deputy Inspector General Jas Rae presented a collection of microscopic specimens of Diatoms, numbering about 5000. The collection of marine and land shells is also very good; the birds and fishes are likewise well represented.

Among the curios may be mentioned Captain Cook's speaking trumpet.

If one were called upon to point out the distinguishing feature of the pathological department, he would most probably select the diseases and injuries of the bones, and the large number of aortic aneurisms.

CHAPTER XIV.

The Burial Grounds of the Hospital.



Old Cemetery.

THE whole land to the south-west of the hospital, including the enclosed ground now known as the paddock and the old cemetery, as well as the ground on

which the Terrace stands, was used indiscriminately as a burial ground, in the early days of the hospital. As I have already mentioned, any excavation in the neighbourhood of the Terrace, even now, disclose skeletons, only a few feet from the surface; although the skulls and the long bones are fairly well preserved, there are no traces of coffins, and it is doubtful if any ever existed.

No record was ever kept of the numbers of bodies interred here, but no doubt they were very great. We know that in the eighteenth century, the men died literally by hundreds. Dr. Lind, who was Physician to the hospital, states that in 1780, which was not an exceptional year, 909 died in the hospital, while in 1779, there were 807 deaths. Then there were in addition, the bodies of all those men who died in the ships at Spithead and in the harbour, and we know that the crews of these ships were frequently decimated by disease. Although there was no registration of interments, yet, it is stated that, in three years towards the end of the eighteenth century, 3,600 bodies were buried in the paddock.

There is a curious complaint, "that corpses landed from the ships for burial, are often left lying the whole day at the landing place, owing to the neglect of the hospital labourers."

The sick and wounded of Sir John Moore's army which occupied Haslar, perished in large numbers, and were interred in the paddock.

The army continued to use the naval burial grounds for many years. A part of the ground was set apart as a Turkish cemetery, but on the building of the zymotic hospital, the Turkish tombstones and remains were removed to the new cemetery. Many of the men who perished in the wreck of the *Royal George* are buried in the paddock, and it is possible, that the remains of Admiral Kempenfelt himself lie here.

In 1826 the north corner of the paddock was enclosed by a wall, and the ground consecrated and used as a cemetery.

The tombstones scattered over the paddock were ordered to be removed, and carried inside, and placed against the wall of the newly enclosed ground.

Among these stones, is that to the first Governor of the Hospital, as well as one to a Russian Noble. Only one horizontal stone was left, this is quite near the south end of the terrace, and although now illegible, it was deciphered a few years ago, as erected to the memory of two brothers called Marshall, one a Chaplain in the Navy, and the other a Colonel of a regiment in Gosport.

The old cemetery was discontinued as a burial ground in 1859, and is now used for the production of flowers and plants for the hospital, as it is well wooded and carefully kept, it forms one of the most charming spots in the neighbourhood.

The new cemetery situated about a quarter of a mile beyond the old burial ground, was opened in April 1859, and so rapidly has it filled, that more ground had to be enclosed in 1904. One of the largest and most imposing monuments in the new cemetery is that erected to the memory of the 311 officers and men who perished in H.M.S. Eurydice, which foundered off the Isle of Wight, on 24th March, 1878.

Here also are interred the bodies of 2 officers and 9 men of the submarine A.1. disaster, which occurred on 18th March, 1904.

The mortality in Haslar hospital shows remarkable uniformity, during the last six years, the highest death rate per annum has been 69 and the lowest 63, a difference of 6 only, an average of 65.

The new cemetery has not only to provide space for those who die at Haslar, but for the whole port, as well as for the marines in barracks.

CHAPTER XV.

Haslar Bridge.

A history of Haslar hospital would be incomplete without a reference to Haslar Bridge, which connects the establishment with Gosport.



Haslar Bridge and Hospital.

We find in the old records, frequent reference to the "Ferryman, who was borne on the books of the hospital as part complement. His duties were to convey the Officials of the hospital from one side of the Creek to the other. This ferryman, as we will

see, was in constant danger of being seized by the press-gang ; and we read, how in fear and trembling he sought the protection of the Physician and Council.

Previous to 1762, there was no bridge across the "lake" or creek, but in that year the Physician and Council pointed out to the Commissioners for the sick and hurt, the advantages of having a bridge erected. One of their chief arguments in favour of the construction of a bridge, was, that in the case of fire, they would be so much nearer to Gosport, and thus obtain assistance so much quicker, and as justifying their demand, they refer to the unfortunate accident that had befallen Plymouth hospital, from fire.

They also state that it would be of great service in procuring provisions cheaper from the contractors. The Brewer alone, "says he would supply beer, £30 a year under the present contract, and the other contractors would make abatements in proportion."

In 1795 we find the bridge built, and as we may presume, Lewis, the ferryman, finding his appointment threatened with extinction, commenced to build a house at the foot of the bridge, on the Gosport side, wherein he proposed to sell beer, having obtained a licence from the Gosport Magistrates.

This conduct of the late ferryman irritated the Governor of Haslar, who promptly tried to prevent him selling intoxicating liquors. In this the Governor

failed ; and the ferryman not only sold beer, but obtained a licence also to sell spirits, which aggravated the case still more.

As the Magistrates would not take away the licence from the public at the foot of the bridge, and as the people of Haslar went over the bridge to get liquor, and much drunkenness followed, the Governor recommended the Admiralty to remove the bridge altogether, but this they refused to do ; he then suggested that the road leading from the bridge to Haslar, which is a private road, should be stopped, and the land let to a farmer as a field. (1796).

This bridge, it appears, was not a Government bridge, but was owned by a Mr. Forbes. The bridge did not exist very long, being destroyed about 1801.

We find in 1810, the Admiralty agreed to pay Mr. Forbes, late proprietor, £20 per annum, for the time the people of Haslar passed over the bridge without toll.

In 1811, the people of Haslar petitioned the Admiralty to build a bridge over the creek. An order was accordingly given to the Officer Commanding the Royal Engineers, to erect a timber bridge over the water. This seems to have been only a temporary bridge, or probably only a foot bridge.

In 1813, we find that Mr. Forbes, or his executors had not yet been paid the £20 per annum for the time people passed over his bridge free.

In 1814, the residents in Haslar again petitioned the Government to build a bridge, and in 1815, the Admiralty refused to entertain the question of building a bridge, owing to the great expense, and the small convenience it would be to Haslar hospital.

Nothing further was done for twenty years, when the present proprietary bridge was constructed, and opened for traffic on 1st April, 1835.

The Admiralty agreed to an annual payment of £50 to the bridge company, in consideration that the Officers and persons belonging to the hospital, their families and servants should be exempt from toll. The residents of Haslar hospital still continue to be exempt from toll, and the annual payment remains the same.

Those who invested their money in this bridge, did wisely, as I believe, the shareholders of the company receive handsome dividends.

CHAPTER XVI.

A general view of Haslar and its surroundings.

During the comparatively short period of my personal knowledge of Haslar, about 27 years, I may say, I have seen the whole hospital renovated, and so many new buildings have been added that the establishment is altogether transformed. In fact, little remains of the old general hospital except the walls and the staircases. The stairs are still handsome, with fine old oak balustrades, and were much admired by our late Majesty, Queen Victoria, when she visited the hospital.

In my early days the ward floors were deal covered with cocoa-nut matting, this gave place to linoleum, which has now in its turn been replaced by highly polished teak floors. In the early days the floors were sanded, and in 1766 we find the Physician and Council complaining that there were no sand nor mops, and therefore it was impossible to keep the wards clean. Under Dr. Lind the sand disappeared. Howard in referring to Haslar, 1788, says, what is very different from the practice in the county hospitals, none of the floors was sanded.



Haslar Quadrangle.

The furniture of the wards has also been improved ; instead of the deal forms for seats, there is now a chair for each patient. The deal tables have been replaced by white enamelled metal bedside tables, one for each bed, with drawer and plate-glass top. A large solid teak dining table is placed in each ward.

The bedsteads are of iron with wire mattresses, and both tables and bedsteads are fitted with casters with rubber tyres.

If the difference between the past and present is well marked inside the walls, outside the prospect has no less changed, instead of the smooth grass lawns and flower beds, we are told, the grounds are overgrown with broom, thistles, and other obnoxious weeds.

In 1761, Mr. Trotman, the Steward, suggested laying out the quadrangle, and the Physician and Council thought something of the kind ought to be done.

The quadrangle was eventually laid out, and wooden posts and rails put up to keep the patients from walking on the grass and flowers, but these posts were so frequently broken, that an estimate was obtained of £50, to erect stone posts and chains. The stone posts and chains still remain.

The airing grounds have a long stretch of sea front overlooking Spithead, with beautiful views of the Isle of Wight on the right, and Portsmouth and Southsea on the left. This sea-wall was not finished until 1797; it ends in Fort Monckton, the Fort in

which the Military guard of the hospital formerly were lodged, on the south-west; and on the north-east in a narrow spit, on the extreme end of which stands Fort Blockhouse, which guards the western entrance to Portsmouth harbour, and from which in by gone times great chains were stretched to the opposite side of the harbour. These chains were tightened in time of danger by means of capstans, and thus served to protect the harbour from hostile fleets. They were last used in 1778, but were still present at the beginning of the 19th Century. On this point, also, stood a gibbet on which the bodies of local criminals were hung as a warning to evil doers. The last time it was used was in 1780, when Jack the Painter, a notorious criminal, who attempted to burn down Portsmouth Dockyard, was hung in chains, here.

Midway between Fort Blockhouse and Haslar Bridge is the jetty, at which the patients are landed from the ships. Two hospital boats, built for the purpose, collect the sick from the ships in harbour and at Spithead, for conveyance to Haslar. At the jetty the patients are transferred from the hospital boats to large four wheeled ambulances, which run on rails in a straight line to the Receiving Room.

As I now write, the authorities have begun to remove the old oak stairs, and to replace them by fire proof material. The stairs and stair cases are the last items of the old hospital to be renewed and brought up

to date, and when this work, which will probably take several years to accomplish, is completed, then the whole hospital will have been renovated, and brought up to the standard of modern institutions as regards precautions against fire and the principles of sanitary science.

CHAPTER XVII.

The Personnel of the Royal Naval Hospital.

To understand the behaviour of the personnel of our hospitals, behaviour which to us at the present day, appears most extraordinary, it behoves us to look at the history of the times, and to study the customs of the people, and especially those placed in Government authority.

During the 18th century maladministration and abuses were very prevalent throughout the Royal Navy, not that moral corruption in the conduct of the affairs of the Navy was confined to that department, nor was it any new thing as far as the Navy was concerned, as we know from various sources that such laxity of morals had existed from the days of Queen Elizabeth.

The commission which was abolished in 1724, had to be again revived in 1794, owing to prevailing abuses. Corruption invaded all departments of the Navy. The malpractices were enacted more or less openly, as Robinson says "The state was looked upon

as a milch cow ; it was necessary to bribe in some way or other to obtain a good post, and having obtained it, he was held a fool who did not get the most out of it." It is not to be supposed that the medical department was altogether an exception, yet I think we may be proud of our predecessors at Haslar, that such abuses as are brought against the personnel of the Naval hospitals are minor delinquencies compared with the gross corruption that pervaded other departments of the state.

Haslar hospital appears to have been singularly free from grave accusations. It is true, that the victualling stores had a habit of showing a deficiency, and that the effects of the men admitted as patients too frequently disappeared, while the bed-linen and stores in charge of the matron could not always be accounted for, yet as regards the Medical Officers of the hospital, their greatest crime seems to have been "Private practice."

Dr. Trotter says "that nothing can be more indecent than a member of a public board traversing the metropolis in the private exercise of his profession ; it appears to me, that the man who decoys a commissioner of sick and hurt, a Physician of a Fleet or Naval hospital to give advice for a guinea, is guilty of something that approaches near to bribery, and liable to prosecution."

The medical officers of the Royal Naval Hospitals were allowed to practice their profession among civilians, often to the detriment of these institutions. Trotter says, he hears "of the Medical Attendant of a Public institution having accumulated thirty or forty thousand pounds by the private exercise of his profession.

He gives several incidents which reflect unfavourably on the management of our Naval Hospitals.

A Seamen fell from the top of a ship fitting at Plymouth, and was dreadfully injured. "He was immediately conveyed on shore, but nobody could be found to open the gate of the Hospital. At last access was obtained; but the surgeon could not be found; he was attending a gentleman of great fortune in Cornwall." It is added that the man died from the hæmorrhage from his wounds.

The same writer also relates "how a Post Captain was so ill as to be carried on shore in his bed to sick quarters. He was visited on the third day by a private Physician, who came at the desire of the Surgeon of the Royal Hospital, as the latter was attending the accouchement of Lady M.— at sixty miles distance."

Trotter recommended that the Surgeons of Royal Naval Hospitals should be lodged within the walls,

also, that all the Assistants of the hospital should reside within the hospital and have suitable apartments and house provisions allowed. "At present they live at a distance, and many of them keep shop." He also advised the total abolition of the private exercise of the profession by Officers of the hospital.

The hospital at Haslar was opened for the reception of patients in 1754, but at that time, and for many years after its inauguration, Haslar hospital consisted of little besides the building of the front block. The Medical Officers had no official residences, and the senior officers appear to have lived away from the hospital altogether, but the junior Medical Officers and minor Officials had accommodation within the walls; even many of the labourers with their wives and children were lodged in the hospital, which thus curtailed the space available for the few patients who could be admitted.

The majority of the sick were still distributed to the hospitals at Fareham and Forton, and scattered about the town of Gosport, not excepting even the public-houses.

The organisation and administration of a large institution like Haslar Hospital have been the slow growth of years. In its early days, the hospital was administered by what was officially designated the "Physician and Council," this comprised the Senior Medical Officer and the Principal Officers of the

hospital, seven in number, who were responsible to the Commissioners for the sick and hurt.

The hospital records date from the 24th Feb. 1756, and although the Physician and Council were responsible for the good government of the hospital, yet they could not engage a nurse or dismiss a labourer without the sanction of the Commissioners for the sick and wounded. Letters were constantly passing between the Commissioners in London and the Administrative body in Haslar, which thus gives us a clear insight into the working of the hospital in its infancy.

The staff consisted of the Medical Officers, Dispensers, Steward, Matron, Nurses, and 4 or 5 labourers; and to this nucleus others were gradually added as time went on. Thus the Physician and Council had great difficulty in finding a fit person to act as barber, while it took many weeks to procure a suitable man as plumber.

That this small community at Haslar did not live at peace and concord might have been inferred, if it were not made evident from the mass of correspondence taken up with frivolous complaints, petty scandal and abuse. Such a complaint as Mr. Parker, Assistant Dispenser, made, of having received "gross abuse" from Mrs. Cooper, one of the nurses, may be taken as a sample.

On investigation of the affair before the Physician and Council, Mrs. Cooper's story was that when passing the Assistant Dispenser's house "he came out and pointed at her, upon which two gentlemen came out and made a noise, and called after her Mrs. Cooper," of course, Mr. Parker denied that he ever pointed at Mrs. Cooper.

After many witnesses had been called, it was stated that Mr Parker acted under great provocation, Mrs. Cooper having called him "a saucy impertinent fellow." Whereas Mrs. Cooper declared that Mr. Parker begun the altercation by calling her "a saucy slut." The Physician and Council in their finding, report that it appeared to them a matter of doubt who was the aggressor, but that allowance must be made for Mrs. Cooper in the particular circumstances. They found by way of explanation that there was something behind all this superficial sparring, and that something was as follows. "There had about this time been found in the Chapel yard at Gosport, an infant, supposed to be murdered, and this woman had been scandalously suspected to be the mother of it, at such a time to be pointed at, in a public place by one gentleman, and hallooed after and called names by several others, would naturally exasperate almost any woman, etc." "We thought it would be right to leave the parties to make it up between themselves."

Mr. Parker seems to have been of a quarrelsome disposition. Early in 1760 he accuses Mr. Trotman,

the steward, of carrying off the hospital butter, "butter being carried into Mr. Trotman's house." Much abuse passed between the two disputants, but an unfortunate event occurred in Mr. Trotman's house which was immediately credited as the consequence of the quarrel. "Mr. Dods, who was sent for, the evening of the day the dispute arose, to Mrs. Trotman, is of opinion that her miscarriage was not owing to that affair, as she had been ill for ten days before, and that it was a consequence that would naturally have occurred had not that dispute happened." Mr. Parker had further to be admonished for speaking disrespectfully about an Officer.

To add fuel to the smouldering embers, Mr. Trotman in the absence of Mr. Parker discovered a cabin belonging to a "Nurse of Mr. Parker's in a wretched and stinking condition," and again the dispute breaks out afresh, and again the correspondence is transmitted to the Commissioners of the sick and hurt, and so the strife was prolonged, and the Physician and Council, as well as the Commissioners, kept busy. This will suffice for accusations and recriminations.

On 14th Sept., 1763. Orders were received to reduce the Royal Hospital, at Haslar, during the time of peace to the following establishment.

1 Physician	at	£200	per annum.
1 Surgeon	"	150	" "
1 Assistant to him	"	5/-	per day

1 Steward	at £100 per annum.
1 Clerk to him	„ 50 „ „
1 Agent	„ 100 „ „
1 Clerk to him	„ 50 „ „
1 Chaplain	„ 50 „ „
1 Dispenser	„ 100 „ „
1 Assistant to him	„ 50 „ „
1 Matron	„ 25 „ „
1 Butler	„ 20 „ „
1 Porter	„ 30 „ „
1 Barber	„ 20 „ „
1 Cook	„ 12 „ „
1 Ferryman	„ 20 „ „
1 Plumber	„ 2/- per day

With only such a number of labourers as the service may really require to keep such a large building in proper order, at the rate of 5/- a week, each, and the provisions of the hospital.

CHAPTER XVIII.

WHEN Dr. Trotter was appointed Physician to the Fleet in 1794, he pointed out to the Commander-in-Chief, what he considered to be deficiencies in Haslar Hospital. Among other defects he thought the hospital was particularly deficient in Naval Officers to keep the seamen under discipline and command, and in buildings to lodge the Officers. The Commander-in-Chief ordered a general inquiry into Haslar Hospital, by two Flag Officers and two Captains. The result was the appointment of a Governor and two Lieutenants, in Sept. 1795; and on 1st Oct., the same year, the sites for erecting the houses of a Governor, Lieutenants and other Officers, were marked out. Although it was through the representations of Dr. Trotter that the Executive Officers were appointed to hospitals, yet he believed the service would be injured by making the appointments of the Captains and Lieutenants permanent, and that greater benefit would be secured by changing them every three years. We know that the appointments were permanent in the fullest sense of the word.

A stone is erected in Haslar Cemetery to Lieutenant Parker of this hospital, who died in 1862, aged 83 years; he was appointed to Haslar in 1834, and therefore had 28 years service in the hospital.

The administration of the hospital was now taken out of the hands of the "Physician and Council," and vested in those of the Governor and Lieutenants. The Senior Executive Officer, was usually a Captain of the Royal Navy, although occasionally, he was of flag-rank, a Rear Admiral. He was called "Governor" until 1820. After this date, he was Captain and also a "Resident Commissioner." In 1840, he was styled "Captain Superintendent," and remained so until the appointment was abolished in April 1870.

The Executive Officers were appointed for the purpose of "superintending the internal economy of the of the Naval hospitals, not only in assuring the proper attention to the sick, but by preventing in the most effectual manner, the inconveniences which have frequently been felt from a want of proper discipline and subordination in the said hospitals."

The first Governor as soon as he arrived at Haslar, even before he had received his Official appointment, began to make secure his position as head of the establishment. There can be no doubt, but that the Governor had very exalted ideas of his office, and his reports to the Commissioners of sick and hurt teem with complaints, not only against the

Medical Officers of the ships and the hospital, but even against other Executive Officers for their want of respect for his position.

Indeed, he writes a long letter to the Admiralty, setting forth his position in detail. He states that the Admiralty Board have treated him badly in their correspondence, so likewise the Medical department, which sent letters to him, and noted on them "Governor and Council," "which at best allows me to be only co-equal individually with the members of it, and as from the tenor of my appointment, I cannot allow an equal, this adopted mode of the Board appears to me highly improper."

He goes on to say that their conduct "appears to be truly incompatible with the idea I hold of my situation,"

To discharge patients from hospital, is a duty, one would suppose that might be performed by any official. Not so the Governor, he not feeling well enough to go down to the hospital and discharge patients, requests "that a Captain might be sent from a man-of-war in harbour, to do this duty, as he could not delegate that power to any inferior officer."

On 21st September, 1795 the Governor reported the Medical Assistants, the Assistant Surgeons, and Dispensers' Assistants for the "exceeding remissness in their attendance at the hospital." He gave an order that they were to come into hospital at an earlier hour

in the morning, the consequence was, they came to him in a body "with the most unparalleled rudeness and mutinous appearance, that they would immediately quit the hospital if they were not allowed to come in at the accustomed hour." The Governor mentions a book which was kept in the Porter's Lodge, and in which was entered the time of the going out or coming in of each individual, "for ascertaining the time of every person's attendance at the hospital."

It is not surprising that there should be a considerable amount of friction between the Executive and Medical Officers, when we find that the Lieutenants had charge of, and patrolled the wards, and that their duty as defined by the Governor was to "attend particularly to the Medical care of the patients, by asking them, when they visited the wards, if they are properly, regularly, and carefully attended to by those gentlemen, (Medical Officers) or if they have any complaint to make." The consequence of this was the frequent collision between the Assistant Surgeons of the wards and the Lieutenants.

This disagreement between the Executive and Medical department was productive of some amusing incidents, more especially when the army invaded Haslar for a time. Sir James McGregor, in his autobiography, relates how the greater part of Haslar was lent by the Admiralty to the War Office for the accommodation of Sir John Moore's army, which had just

returned with an overwhelming number of sick and wounded, (1808). Typhus was particularly rampant. Sir James McGregor was then Inspector at Portsmouth in the Army Medical Department. He writes "Two Deputy Inspectors of Hospitals were sent to Portsmouth to act under my orders." He appointed one of these Deputy Inspectors for duty at Haslar, "which we had obtained possession of, only on condition that we should strictly conform to all the rules of naval discipline, (and it was intimated to us in such a way as though they feared a breach of it,) and that the utmost deference and respect should be paid to the Naval Captain, at the head of the hospital, who was styled "Governor." I inculcated on Mr. Hogg, the Deputy-Inspector at Haslar, that he should impress on all the young Medical Officers the utmost respect towards this personage, and that he would see that the externals of respect, which I knew the Governor rigidly looked for, were most ceremoniously paid him.

In no long time, I found that the young Medical Officers, having become acquainted with the character of "His Excellency the Governor" of the hospital, rather exceeded in the externals of respect towards the old gentleman, and received him with much mock state, which, however, he for some time received most graciously, until he found out that this marked respectful demeanour was shown in derision.

He then complained to General Whetham, and said by the introduction of these young army

doctors, the discipline of the hospital would be destroyed, and that he would never again be able to bring the medical officers of the Navy to a due sense of the respect they owed him.

One of the standing orders of this dignified personage was that on entering the gate of the hospital every military as well as naval officer should have his name taken down by the Porter, in a book, with the precise hour and minute of his entry, so that his Excellency should be acquainted with all the movements of each individual.

Another of his orders was to this effect, "that every medical officer should touch his hat to him, every time he saw His Excellency, however often that might be.

Two very young Irish Assistant Surgeons had somehow been wanting in this mark of respect for the Governor, of which he made a formal complaint to General Whetham, and the complaint was conveyed in such terms that I was sent with General Porter, second in Command of the Garrison, to explain and pacify the Governor. We had some difficulty in keeping our countenances, during the time we executed our mission to His Excellency. I called the Medical Officers together, and explained to them, that while we were indulged with the use of the Naval Hospital for the soldiers we must conform to all its regulations, and that the utmost courtesy be paid to the Governor. This

was caught up immediately and carried into execution in its most liberal meaning.

On the following day and for many days afterwards, the Medical Officers assembled in the court-yard of the hospital, and awaited the appearance of the Governor, when they formed a line on each side of the path through which he had to pass, and as he passed through the line, all were instantly uncovered. This was understood by him as a mark of perfect respect, and as he passed through the line, he smiled most complacently, bowing to each side very graciously.

On another occasion, he called for higher honours than the military guard at the hospital paid him, and he insisted, that besides the guard turning out to him when he passed, he was entitled to a march by beat of drums. The Sergeant came up to the young Irish Officer who commanded the guard for instructions, and he instantly told him to beat the "Rogues March," which quite satisfied and delighted his Excellency, he not knowing the kind of air which was played to him, although every man of the guard was almost suffocated with laughter. But the beating a march was never repeated."

That the Governor endeavoured by every means to establish his position, is evident, as we find him requesting "the Commissioners for the sick and hurt, not to style or give me any appellation than Governor, as I cannot be known to them (Officers of the hospital) by any other name."

He also wished the Commissioners "so to direct those gentlemen, (Medical Officers) as no doubt shall remain on their minds of our relative situations, and of their being positively under my command." He further says they believe "that they are entire masters of their own conduct, and of a distinct department,"

The Governor regretted that he could not read the articles of war in the hospital, and enforce the punishments contained therein, as then, he says, everything would go smoothly.

There is a curious request made by the Governor to the Commissioners on 31st March, 1796, "to be supplied with a daily news-paper from London, as well as the weekly Portsmouth paper, should you think it necessary for me to be informed through that channel when publications are made from the Board."

We must now look at the Governor and other Executive Officers from the other point of view, and here we find that life was not all sunshine, and that there were truculent Officers, who did not uncover in the august presence.

The Governor was abused and threatened, as we read, by former patients. A Lieutenant swore, "for a farthing he would affront that fellow," (the Governor) because he was not allowed to remain at sick quarters on shore in Portsmouth.

“ Another, when he left the hospital, declared he intended caning me, because I would not permit him to be absent from the hospital whenever he thought fit.”

One of the Lieutenants received a challenge from a Midshipman, who had been discharged from the hospital a few days before, “ because the Lieutenant would not admit him as a visitor after six o’clock in the evening, when he had forced his way by the Porter into the hospital, to go into the building to kick up a riot and confusion with some of his late associates, but ordered him out of the gate.”

For this he received the following :—

“ Amazon,”

“ Fountain,”

Lieutenant Glover.

Gosport

December 26th, 1795.

Sir,

As I think you have grossly affronted me by refusing me admittance this evening. I therefore request that you will give me gentlemanlike satisfaction to-morrow, or explain your reason for acting in such a manner.

Geo. Bolton.

This was not the only challenge received by the Lieutenants. In answer to a challenge from one of the clerical staff in Haslar, the Lieutenant asks “ if he is supposed to fight every impertinent clerk in office.”

In judging the actions of the officers of that day, we must remember that the manners and customs of the period were quite different from those of the present time.

Duelling was very fashionable at the end of the eighteenth century, and although the Governor's discipline may appear harsh and arbitrary, while his language was plain and direct,—he describes in one of his official correspondence a man as “a damned rascal,”—yet he seems to have had a kindly heart, and interceded with the Admiralty on several occasions for leniency towards those in Haslar, who had erred or fallen into misfortune.

CHAPTER XIX.

Medical Officers of the Hospital.



Dr. James Lind, M.D.

THERE is very little known regarding the individual Medical Officers in the early days of the hospital.

We know that the first Physician was appointed in 1753, a Dr. Cuthbert, and that the first surgeon to the establishment was a Mr. Gregory Carlos.

Haslar's most famous Physician was Dr. James Lind, who occupied the position of Physician to the hospital during the latter part of the eighteenth century. He has always been called the "Father of Naval Medicine," and was one of the greatest writers and authorities on scurvy in the Navy. He was appointed Physician to Haslar Hospital in 1758 and died in 1794.

In the eighteenth century the Medical Officers of the hospital were quite distinct from the Medical Officers of the Navy afloat. The junior Medical Officers, assistants to the Physicians and to the Surgeons, were engaged by the Commissioners for the sick and hurt without any examination or other test of ability than some recommendation of character, or that the candidate was known to some one in authority. On the assistant becoming dissatisfied with his position, all he had to do was to give notice to the Commissioners that he wished to be given his discharge. On the reduction of the hospital staff, the authorities acted upon the principle that the last joined should be the first to be removed. There was thus a continual coming and going of young Medical men at the Hospital.

That these assistants and others were engaged to do duty at Haslar without any definite qualification is evident, as we find a man who was accustomed to come to the hospital to let blood applying for the position of surgeon.

We have seen that the Medical Staff in 1763 consisted of one Physician, one surgeon, and one assistant to the surgeon, a dispenser and his assistant, This was the lowest ebb of the establishment on a peace footing.

At the end of the eighteenth and beginning of the nineteenth century the staff at Haslar consisted of:— A Governor at £500 per annum. 3 Lieutenants at £130 each, per annum. 3 Physicians at £250 each, per annum. 3 Surgeons, one at £230 per annum, and two at £200 each, per annum. A Steward; an Agent; a Dispenser: and a Chaplain all at £150 each, per annum.

As we have seen, many of the Officials were lodged within the hospital walls with their families.

Let us glance for a minute at what the records reveal concerning the life of the Medical men, lodged in the hospital.

The Receiving Surgeon, Mr Matthew, and his wife lived in the hospital, and as so frequently happens in such circumstances, Mrs. Matthew did not agree with her neighbours; she, "having taken some liberties tending to traduce the character of Mrs. Taylor, one of the matrons," would not apologise to Mrs. Taylor for her rudeness, so the Governor requested the Commissioners for sick and hurt to remove her from the precincts of the hospital.

An Assistant Surgeon, in 1797, not only brought his wife to live with him in the "Duty cabin," but what annoyed the Governor greatly, he brought dogs also to share his quarters. The habit of keeping dogs in the hospital by the Surgeons seems to have been very prevalent, and if we may judge from the many complaints made, it must have constituted a nuisance.

Now, those living within the hospital walls grieved the Governor much by their late hours and irregular conduct, he therefore requested authority to compel everyone to be within the hospital gates at 10.30 p.m. in summer, and 10 p.m. in winter. He mentions particularly the late hours of the Assistant Surgeon and the Assistant Clerk.

Money was tight all round in the latter half of the eighteenth century, and particularly so as regards Naval hospitals. Not only were the Nurses unable to draw their pay, but we read how the Physician and Council in July, 1759, complain of "the irregular manner in which we receive our salary." This complaint had no effect, so they wrote to the Commissioners in December, 1760.

"We pray further leave to observe that our salaries at Christmas will be three quarters in arrear." The Commissioners for the sick and wounded were very displeased with this reminder, and the Physician and Council, being called on for an explanation, they wrote that they only wished to have their salaries paid in a fixed and regular method.

We have seen how the Medical staff of our hospitals pursued private practice, often to the neglect of the patients therein ; so by an order in 1797, Medical Officers of our hospitals were positively forbidden to continue private practice.

No one can read the old records of Haslar without having his attention drawn to the disparity between the position of Physician and that of Surgeon. We know that during the latter part of the sixteenth and early in the seventeenth century, a continual war was waged between Physicians and Surgeons. The college of Physicians rigorously excluded Surgeons from general practice. It was decided at law, that it was illegal for a Surgeon to give internal remedies, even in the treatment of ulcer or wounds, and in 1627, it was enacted that no Surgeon in the city of London or within seven miles thereof should be allowed to do any operation on the body of any man, woman, or child, but in the presence of a learned Physician.

This rivalry and jealousy between the two healing professions, continued for many years, and in which the Physician contrived to hold the superior position.

In Haslar hospital the pay and position of the Physician was far in advance of that of Surgeon.

We find it laid down in the regulations of the hospital, at the beginning of the nineteenth century, that the Physician in his visits to the wards should

write always in red ink, for the sake of distinction, and that his prescriptions were not to be altered without a material change of symptoms, or in recovery of the sick man.

The opinions held by the Surgeon towards the Physician in the Navy are well illustrated in the writings of a Naval Surgeon, which sound strange to our ears to day. He writes, 1806, "The Physician is supposed to conjoin the experience of the Surgeon with certain superior professional acquirements that enable him to take the lead. In cases of operation, the presence of the Physician gives a confidence to the Surgeon to attempt every means of relief with his co-operation, however hazardous or intricate the case may be."

This superiority of the Physician in the Navy continued until the title of Physician was abolished from the Navy list in 1840.

CHAPTER XX.

Changes in 1805.

THE orders in council of the 25th of January, 1805, introduced sweeping reforms into the whole medical department of the Navy, as well as of our hospitals.

By these regulations the Medical staff of the Naval Hospitals became a special branch of the Naval Medical Department.

When a Medical Officer was appointed to a hospital, he held the situation indefinitely. The tenure of office was afterwards reduced to five years, and in the seventies to three years.

The Medical Officer was given special titles, pay, and allowances.

The Assistant Medical Officers, known as "Visiting Assistants," "Assistant Surgeons," and "Assisting Dispensers," were, in future, to be called "Hospital Mates."

The Hospital Mates were to receive six shillings and six pence a day, full pay ; and an allowance of lodging money, at the rate of ten shillings and

sixpence a week, when not accommodated in the Hospital.

Hospital Mates had to qualify for the position they held in the Hospital, by examination.

The half-pay of the Hospital Mate was to be at the rate of two shillings a day.

The Surgeons of hospitals. The Surgeons shall be selected from the list of Naval Surgeons, and shall receive fifteen shillings a day, and twenty shillings a day, after serving in a hospital ten years.

The surgeons, when not provided with a residence within the hospital, shall be allowed fifteen shillings per week, lodging money.

The half pay, retiring, and pension, were to be the same as Surgeons afloat.

Physicians. No person shall be appointed Physician, who shall not have served as Surgeon, at least five years. Both Drs. Lind and Blane, our two greatest Naval Medical writers and sanitarians, were appointed direct from Civil hospitals, and not from Naval Surgeons.

The daily pay of a Physician on his first appointment to be one guinea, his half pay half a guinea per diem.

Pay after three years one guinea and a half a day; half pay fifteen shillings. After ten years service, full pay shall be two guineas, and half pay one guinea a day.

That Physicians when a residence is not provided for them, shall be allowed one guinea a week lodging allowance.

The widows of Physicians and Surgeons to be allowed such pension as the Lords Commissioners of the Admiralty shall think it right to grant.

By the same regulations, 1805, the Medical Officer obtained a relative rank, which he had not before, he was given a uniform, and the pay of all ranks was materially increased.

In 1810 a great rise in pay was conceded to the hospital staff.

Governor £800 per annum.

3 Lieutenants £200 each, per annum.

1 Physician £766 : 10, per annum.

2 Other Physicians £600, each per annum.

2 Surgeons £500, each per annum.

1 Assistant Surgeon	} Salaries not stated.
2 Hospital Mates	

Steward £350 per annum

Agent £353 " "

Dispenser £300 " "

Chaplain £300 " "

A report of the Civil commission, which was appointed to enquire into the condition and organization of Naval hospitals, was presented to parliament on 20th July, 1869. It reported that "speaking in general terms, the management of the large naval hospitals is

in all respects admirable, to secure the comfort and well-being of the patients. They (the establishments) represent the perfection of intelligent hospital construction and administration, but are unattainable in our London hospitals.

It would be in our opinion, much to be regretted that any change should be made which would tend to cripple these noble institutions; nor would it be becoming of us, as Officers of the metropolitan charities, to write any report on the Naval hospitals, without recording distinctly our opinion that their Medical arrangements are in all respects admirable, and such as voluntary foundations would willingly copy, if their circumstances permitted."

As a result of this commission, the Captains and Lieutenants of Naval hospitals were abolished in April, 1870.

The Staff at Haslar has varied from time to time as we have seen, In 1825, it consisted of :—

One Captain and two Lieutenants.

One Physician, one Surgeon, and five hospital mates.

In 1850 the Staff comprised,

One Captain and two Lieutenants.

Two Medical Inspectors.

One Deputy Medical Inspector.

One Surgeon and Medical store-keeper, and six Assistant Surgeons.

In 1868, before the abolition of the Captain Superintendent, and the two Lieutenants, the Staff consisted of :—

One Captain and two Lieutenants.

One Inspector General.

Two Deputy Inspectors General.

One Staff Surgeon, and three assistant Surgeons.

After the removal of the Executive Officers from the Naval hospitals, the Medical Staff remained the same ; the whole of the responsibilities and administrative duties devolving upon the Inspector General, James Salmon, M.D. who as now, became the head of the establishment.

In 1840, the Agent and Steward were combined in one individual, in 1870 the title was changed into Clerk and Agent, and in 1879 into the present title of Storekeeper and Cashier.

Surgeon and Medical Storekeeper was started in 1831, and continued until 1870, when it was abolished.

The Principal and other Officers of Haslar Hospital at the present day, are as follows :—

One Inspector General.

A Secretary to Inspector General.

Two Deputy Inspectors General.

A Storekeeper and Cashier.

A Chaplain.

Two Fleet Surgeons.

One Fleet Surgeon to assist in instruction of Surgeons on entry.

Three Staff Surgeons.

Four Surgeons.

One Head Sister.

Fourteen Nursing Sisters.

A Store Matron.

Six Dispensers.

A Head Wardmaster.

A Dental Surgeon (civil). Until 1905 the dental work of the hospital had been performed by a Surgeon or Staff Surgeon who was borne for "Dental Duties," but in April of that year he was replaced by a civil Dental Surgeon. This Dental Surgeon performs all the dental work of the hospital, as well as attends to the teeth of officers and men belonging to the port. He also instructs the Surgeons, on entry, in Dentistry.

Besides these officials, a large number of men and women are employed at Haslar, either on the established list or hired.

The staff for 1906 consists of the following:—

Chapel Clerk	1	Cooks	4
Museum Attendant	1	Barber	1
Butler	1	Foreman of Laundry	1
Messenger	2	Engine drivers and	
Gardener	1	Mechanics	5
Foreman of Labourers	1	Stokers	5
Foremen of Stores	3	Seamstresses	5
Postman	1	Washer-women	7
Labourers	44	Scrubbers	5
Servants to Medical Officers	19.	A total of 107	

CHAPTER XXI.

**Internal economy of the hospital. Duties of
the Medical Officers.**

THE Inspector General is the professional and administrative head of the hospital, and he is responsible for the general economy, discipline, and good order, of the whole establishment ; and also for the efficient discharge of the duties, professional and non-professional of the several officers forming the staff of the hospital.

He on all occasions ensures that proper subordination and regularity are preserved, not only by the patients, but by every officer and person belonging to the hospital.

He can discharge any of the Labourers or hired men for misconduct, etc., and can engage others in their places.

He exercises professional supervision over the wards, visiting them as often as he considers necessary, but he does not interfere in ordinary cases with the treatment adopted by the Medical Officer in charge.

He has to arrange that a certain number of Medical Officers are always on duty, and available either during the day or night.

He transmits all documents and returns to the Admiralty.

Principal Medical Officers. There are four principal Medical Officers, viz. two Deputy Inspectors, and two Fleet Surgeons. A Deputy and Fleet Surgeon on the Surgical side, and a Deputy and Fleet Surgeon on the Medical side of the hospital. These officers see that the sick are properly attended, and kindly treated, and that everything is kept clean and well aired.

Each P.M.O. must be regular in his visits to his patients. The morning visit is at 9 a.m., summer and winter. He also pays an evening visit about 5 or 6 o'clock.

If a patient be dangerously ill, he directs a surgeon to visit him as frequently as he may judge proper, by day and by night.

In all cases of serious illness or injury he has to inform the Chaplain or Minister of the denomination to which the patient belongs, and also to inform the patient's friends.

He has personally to perform all important surgical operations.

He is responsible that the wards and cabins occupied by his patients, and all the utensils therein,

are kept in a state of perfect cleanliness. He sees also that the bed-linen is changed every week, and body linen twice a week or oftener, if necessary ; that the persons of his patients are kept perfectly clean.

A Medical and Surgical report is made out by the P.M.O. at the end of each quarter, and forwarded to the Admiralty. He has also to make statistical abstracts at the end of each year of all the cases under treatment during the previous 12 months. He has also various duties connected with surveys on patients, and invaliding patients out of the service.

Surgeons and Staff Surgeons are employed in the wards under the supervision of the Principal Medical Officers. It is arranged that the Surgeon should have equal experience of both Medical and Surgical sides of the hospital.

Surgeons on duty are not permitted to leave the hospital. A record is kept showing the names of the surgeons on duty each day.

One Surgeon remains on duty every night, so that prompt assistance may be afforded in case of sudden emergency. The Surgeons on duty have to visit the wards at meal hours, and also at 9 o'clock in the evening, to see that the patients are in bed and lights out, etc.

CHAPTER XXII.

Nurses.

I suppose the absence of a good system of nursing in the early days of the hospital, has given rise to more scandal and to greater disturbances and petty quarrels than any other department of the hospital.

The nurses were for the most part women, but men labourers were employed to wash the patients and to keep them clean. The women nurses do not appear to have been trained in any way, but were chosen for their general suitability for the work. From the annals of the hospital they seem to have left much to be desired both socially and morally. Their pay was meagre, those employed during the first few years received pay at the rate of 2/6 a week, but this was increased later to £12 per annum.

The nurses received their food, what was called the "provisions of the house." Many of the nurses were married, and they were allowed to live in the hospital with their children.

Each person victualled in the hospital received the same scale of provisions as a patient on full diet,

plus 4oz. of butter, which a patient was not allowed. The scale was as follows:—

Breakfast.	Dinner.	Supper.
Bread $\frac{1}{2}$ lb.	Meat 1lb.	Bread $\frac{1}{2}$ lb.
Butter 2oz.	Bread $\frac{1}{4}$ lb.	Butter 2oz.
		or Cheese 4oz.

In 1756 a matron was appointed, but occasionally there were two matrons: the number of nurses at this time was also regulated in proportion to the number of patients, one nurse to ten patients, while two women were borne on the establishment as supernumeraries, to take the place of those “discharged, expelled, or sick,”

That the nurses had not an easy time at this period may be inferred from the reports of the Physician and Council to the Admiralty, in which they complain that “the nurses are daily applying for their discharge, owing to complaints that they are confined and imprisoned, and never eat a hot meal, and are served with the scraps left by the seamen, and badly paid by only having a trifle of their wages at a time, when three or four months are due.” We find repeated complaints from the Physician and Council to the Commissioners that the nurses were not able to draw their slender salaries.

“It often happens” say the Physician and Council, “that on discharging nurses, Mr. Trotman, (the Steward) does not pay their wages, having as he says, no money for the purpose; we have therefore to

keep them in here, or force them out in destitute circumstances."

And again we find a report "the nurses on discharge complain they cannot get their wages, from the Stewards' office without a premium."

In the early days of the hospital, patients were allowed to take their effects into the ward with them ; often large sums of money, trinkets and jewelry. This presented a great temptation to Nurses and others, when the patients were delirious from fever, as they frequently were, or on their decease, and we must remember that the mortality was exceeding high in the hospital. We therefore find frequent complaints from the friends of deceased seamen, relating to the disappearance of reputed valuables, especially silver buckles. Here is one case.

In March, 1759, Miss Elias Smith, nurse, is caught stealing "a silk handkerchief, containing a pair of silver buckles, a pair of Briston stone buckles, and and 3/6 in silver from a seaman patient, from the "Royal Arm," who died in hospital, and was reported to have been in possession of nine thirty-six shilling pieces, one guinea and a half."

Then we have instances of wills being made in favour of the nurses, by seamen who were dying, possessed of considerable wealth, but as many of these patients died from fever with delirium, little trust could be placed in their will making powers. One

nurse reported to Dr. Lind, that a patient wished to draw up a will in her favour. After the death of the patient, it was found that the husband of the nurse, who was a patient also, benefited to the extent of twenty three guineas and a silver watch, but it was stated that the deceased brought forty-three guineas into the hospital.

It was strongly suspected that the nurses connived at the frequent desertions of the men from the wards; and it is reported by the Governor that those patients who were ordered wines and other stimulants saved up the liquor for a long drink, and also for the purpose of bribing the nurses in order to effect their escape.

We find Sarah Carrol a nurse writing to the Commissioners of the sick and hurt, that one of the Steward's clerks had "wickedly and maliciously aspersed my character by a false action for forgery, and sued me at law for the same." She points out the value of an unblemished character, which to her constituted her only means of livelihood, she ends by "requesting the Council at Haslar may be ordered to inquire into the matter. In so doing your Honours will gain the blessing of the poor and likely to be distressed petitioner."

Although vague rumours concerning the unsatisfactory character of these old nurses still hang about Haslar, yet John Howard in his visit to Haslar

in the latter part of the eighteenth century, writes, "all the nurses are women, which is very proper, as they are more cleanly and tender; and they more easily pacify the patients who are seafaring men."

When the great Philanthropist wrote the last sentence, he was probably unaware that a complaint had been lodged by "Nurse Olaye, of having been beat by a patient." What prompted this unchivalrous conduct of the seafaring patient, we are not informed: nor was this a solitary instance, for in June, 1798, a man beat a nurse, in such a manner that her life was endangered.

Howard in his visit to Haslar, 1788, states that the orders and regulations for the nurses were hung up in the wards. These orders were well conceived and carefully drawn up. I will give merely a few extracts from them.

The first order was to forbid any nurse concealing the effects of any patient, who might die in the hospital: the effects of such were to be handed over to the Agent or his clerk.

The nurses were to see the bed and body linen changed punctually, viz. sheets once a fortnight, shirts every four days, night-caps, drawers, and stockings, once a week, oftener if found necessary.

The nurses were not to admit any patient into her cabin, nor suffer any person to remain in it at night, not even her husband or child.

Any nurse who concealed the escape of a patient from her ward, on proof thereof, was to be dismissed.

That all nurses who disobey the matron's orders, get drunk, neglect their patients, quarrel or fight with any other nurses, or quarrel with the men, or do not prudently and cautiously reveal, to the superior Officers of the house, all irregularities committed by the patients in their wards, (such as drinking, smoking tobacco in the wards, quarreling, destroying the medicines, or stores, feigning complaints and neglecting their cure,) be immediately discharged, and a note made against their names, on the books of the hospital, that they may never more be employed.

In the fever, flux, and small-pox wards, "a small chink of the upper part of some one or more of the windows is constantly to be kept open, so as at night, gently to move the flame of a candle, standing on a table, unless otherwise ordered by the Physician."

No cards or gaming of any kind were to be allowed.

The Nurses, when they could be spared by the Matron, were to go to chapel every Sunday.

No person was to be permitted to sell wine, brandy, strong beer, or other liquors, either within the hospital or its bounds.

The Nurses were not to make a will for any patient, nor was any Nurse to accept a will made in her favour.

In 1854, the Female Nurses, after having tended the sick and injured in our naval hospitals for a hundred years, were replaced, with one or two exceptions in the acute Surgical wards, by men.

These men nurses were almost entirely old pensioners, who were engaged and discharged locally, as the number of patients in the wards fluctuated ; they were quite distinct from the nursing staff afloat.

In 1884, the whole question of the nursing in the Royal Navy, was referred to a Committee presided over by Admiral Hoskins. The Committee recommended a Sick Berth Staff, which would combine the duties of nurses, both afloat and ashore ; that they should do the nursing in the ships at sea, and replace the old pensioners in the wards of our Naval Hospitals at home.

The recruits for this service were to be drawn chiefly from Greenwich Hospital School boys ; they were to be sent to a training ship, for seamanship and discipline, and if found suitable, they were afterwards to be sent to Haslar for systematic instruction in elementary anatomy, in bandaging and dressing, including exercise in rendering first aid to the wounded, afloat and ashore ; also dispensing and the art of cookery in the kitchen and sick room.

They were also to have practical instruction in nursing in the wards of Haslar hospital, and on passing an examination were to be rated as Sick Berth Attendant, and drafted for duty as such.

The pay and classification of the new Sick Berth Staff:—

Sick Berth Attendant to have $1/4$ a day.

After 3 years service in that rating $1/6$ a day.

Sick Berth Steward 2nd Class, to be a 2nd Class Petty Officer, $1/9$ a day.

After 3 years service in the rating 2/- a day.

Sick Berth Steward 1st Class, to be a 1st Class Petty Officer, $2/5$ a day.

After 3 years service in the rating $2/8$ a day.

„ 6	„	„	$3/-$	„
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„ 9	„	„	$3/6$	„
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Chief Sick Berth Steward to be a Chief Petty Officer (Wardmaster) in Naval Hospitals, only for men with not less than 14 years' good service, and by selection, 4/- a day, and an allowance of 6d. per day for charge of stores.

The period of service to complete time for pension was 22 years. The time to count from the age of 18. Service engagements to be for not less than five years, after completing time for pension up to 50 years of age, or 55 in the case of Chief Sick Berth Stewards. No member of the Staff to be pensioned while serving.

A Medical Officer of Haslar hospital, for instructing boys training in the hospital £50 a year.

Dispenser 1/- a day.

The scheme of entering boys from the training ships proved a failure, as may be easily understood.

At the present time, recruits for the Sick Berth Staff are entered specially for that branch of the service. The youths are from 18 to 22 years of age. They are sent to the Naval Depôts to undergo four weeks training before being sent to the Naval hospitals for instruction in nursing duties. The Dépôt course includes discipline, swimming, rowing, etc.

The rates of pay and position of the sick berth staff were much improved in 1900.

A head wardmaster, who is a warrant Officer, is now borne for duty at Haslar; his pay goes from 5/6 to 9/- a day according to length of service.

CHAPTER XXIII.

Nursing Sisters.

WHEN the question of nursing in our naval hospitals was under consideration, (1884), it was decided to introduce a staff of trained lady nurses, to superintend the nursing duties of the youths, and assist the male nurses in the wards. The lady nurses were to be fully qualified and certified in efficiency by authorities outside the service, and were first to be tried experimentally at Haslar and Plymouth.

The new scheme came into force on 1st April, 1885, and allowed for 501 nurses, male and female, of whom 17 only were to be female.

Each candidate for appointment as nursing sister must produce certificates of training for at least three years at a large civil hospital in the United Kingdom, in which adult male patients are received for medical and surgical treatment, such hospital being also provided with a matron and staff of nursing sisters. Candidates must be of British parentage or naturalised British subjects.

The age for appointment will not be under 25, and not over 30. Head Sisters to be appointed by selection, as a rule, from the list of nursing sisters.

Sisters entered before 1901, could be retained until 60 years of age, but now all Nursing Sisters are compulsorily retired after 50, and Head Sister after the age of 55.

A Nursing Sister becomes eligible for a pension after ten years service, if she is rendered unfit for further service through disease or injury.

The pension of a Head or Nursing Sister is calculated upon her salary. It is at the rate of 30 per cent of her salary for the preceding year, and rises 2 per cent for each additional year's service, to a maximum of 70 per cent. of her salary.

If a Head Sister or Nursing Sister has to retire on account of unfitness for her duties, she may be granted a gratuity of one months pay for each year of service, should she not be entitled to a pension.

Salaries and allowances.

Head Sister £125 to £160 by annual increments of £5.

Sisters £37-10-0 to £50 by annual increments of £2-10-0.

Each Head Sister and Sister will be allowed, in addition, 1/6 a day in lieu of provisions, and 1/6 a week for the washing of her personal linen.

Furnished apartments are provided for the Sisters, consisting of mess-room, reading-room, kitchen and offices: a separate bed-room is provided for each sister.

The Sisters wear a distinguishing uniform of navy blue serge dresses with scarlet cashmere cuffs, a cape to match with an embroidered badge, consisting of the geneva cross and monogram, two A's red, interlacing an anchor and gold cable; the whole surmounted by the imperial crown.

They wear also white caps, cuffs and aprons.

In March, 1902, Her Majesty Queen Alexandra assumed the Presidency of this staff of nursing sisters, which was in future to be designated "Queen Alexandra's Royal Naval Nursing Service."

CHAPTER XXIV.

Duties of the Nursing Staff.

HEAD Wardmaster. He has to see that the sectional wardmasters perform their duties with regularity and attention, and to exercise a general supervision throughout the wards of the hospital.

He has to check, and report immediately any disorderly conduct on the part of the nursing staff.

He has frequently to inspect the nurse's cabins, scullery, &c., and to see that they are kept in a proper state of order and cleanliness.

He has to see that the nursing staff have leave strictly in accordance with the regulations.

He has to attend all official inspections, surveys, &c.

Sectional Wardmaster. He is responsible for the good order and discipline among the Sick Berth Staff, and patients.

Each ward is placed in charge of a Sick Berth Steward, when available.

He has to see that the printed regulations for nurses are strictly observed.

He is responsible for the cleanliness, good order, and ventilation of the wards and other places connected with the wards; also to prevent infringement of the rules, as regards fires, gas and smoking.

He sees that ashes are taken out, and deposited in the bins, at the appointed time. He has also to see that the regulations as regards prisoners are carried out.

He is responsible for changing the bed and other linen at the laundry, He has to superintend the issue of meals from the kitchen. He is responsible that the watches are present and relieved at the proper time.

He is solely responsible for all stores, furniture, etc., issued for use in his section.

Daily routine.

At 6.30 he musters the Attendants, detailing them for duty. He sees that the nurses and others are clean and properly dressed in the uniform of the day. That the wards, cabins, passages and stairs, are ready for the senior Medical Officer's visit at 9 a.m.

The wardmaster of the section accompanies the Medical Officer through the wards.

He must see that the dinners are correct, and the patrols placed. He furnishes a watch and patrol list in regular order, detailing each man personally for duty.

He must be present with the Medical Officer making the rounds, and he sees that the fires are extinguished and the lights turned down at the appointed hour.

Duties of the Nursing Sisters.

The Head Sister has charge of the Officer patients on the Medical side. She exercises general control and supervision over the Sisters, and visits the wards where they are employed, when she thinks proper.

She allots specific duties to the Sisters, and distributes them through the wards, as may be considered necessary by the Medical Officer. She details Sisters for day duty as well as night duty.

The Sisters receive directions from the Medical Officers in charge of wards to which they are attached, and they attend and leave at such hours as may be determined by the Medical Officer.

They are assisted in the wards by the Stewards and attendants of the Sick Berth Staff. They assist also in training the Sick Berth Attendants in practical nursing duties.

They are held responsible for the personal cleanliness of the patients who are confined to bed; and they see that all medicines, appliances, diets and "extras" are administered according to the instructions of the Medical Officers, whom they accompany in their visits to the patients under their care, and note such orders as may be given.

They are to attend and render assistance at surgical operations when required.

The acute wards, that is, the wards with acute or serious cases, have nurses constantly in attendance day and night. The night nurses take duty in watches of three hours duration, beginning at 9 p. m., the morning watch is generally prolonged to 6.30 a.m., when they are relieved by the day nurses.

The other wards, containing patients more or less convalescent, are visited constantly throughout the night by a patrol, which has the same watches as the other nurses.

Each section of the hospital has its own day and night nurses and its own patrol, while two sisters are on night duty, one for the Medical and one for the Surgical side of the hospital.

CHAPTER XXV.

Labourers.

LABOURERS.—In olden times the term labourer, included servants of the hospital with very diverse duties. Some labourers as we have seen were employed to wash the patients. Others were attached to the surgical wards, and they had “to make and spread pledgits; furnish the boxes with such medicines as were likely to be used by the Surgeons; to keep clean the instruments; to take the instrument boxes into the wards with the Surgeons, and assist as required.” They had to prepare lint and dressings for the patients each day, to be used by the Surgeon on his next visit. When not otherwise engaged, the labourers were employed scraping linen of old sheets and shirts, so as to make lint.

When the Admiralty complained of the great expense of lint supplied to the Service, the Authorities of Haslar were able to say that it was not from the lint supplied to Haslar, as they made their own, and the surgeons preferred it to the London lint.

In 1763, when the establishment at Haslar was reduced to a peace footing the labourers were to be reduced to such numbers only, as the Service may really require, to keep such a large building in proper order, at the rate of 5/- a week, and the provisions of the hospital, with free quarters therein.

The labourers were dissatisfied with their pay, and combined to petition the Admiralty Commissioners to reconsider their case, they pointed out that "no labourer capable of doing his duty, is at that time receiving less than 1/6 a day," and therefore beg for an increase, however small.

In 1762, a labourer belonging to the dispensary, who was no seaman, and had never been to sea before, was impressed, and taken off to Captain Amherst, of the *Arrogant*. He had no opportunity of returning as the ship put to sea at once.

The labourers and other employees of the hospital went in continual fear of being impressed. The ferryman employed by the Board to convey Officers from one side of the water to the other, had been so often threatened by the press-gang, that the Physician and Council petitioned the Admiralty to give him some protection.

Thirty years later, we find the Governor reporting that "Richard Earwaker, a labourer, was pressed yesterday evening, about seven o'clock, as he was driving the cattle from the hospital to the burying

ground." The Governor requested that he might be given up, as he had in his possession "the keys of the coal-cellar and the gate of the burying ground at the time, and which have been obliged to be broken open this morning."

It is evident that poor Earwaker was not such a loss to the hospital, as the keys he had in his possession.

The labourers of the present day have much increased in numbers since the end of the eighteenth century, and although they no longer perform the same duties as their predecessors of a hundred years ago, yet many of them are highly skilled workmen, and are engaged in duties requiring long training, such, e.g. the assistant in the scientific work in the Laboratory.

Much of the work is done out of doors in the summer, cutting and rolling the grass lawns, attending the flowers, plants and paths; while in the winter, there is the heavy work of supplying coal to the different wards, sweeping paths, and constant removal of leaves and rubbish.

CHAPTER XXVI.

The Guard at the Hospital.

In the early days of the hospital and until well into the nineteenth century the hospital grounds were patrolled by a guard of soldiers, drawn from the regiment stationed at Fort Monckton.

In 1795 the guard was only a subaltern's guard, which allowed an inadequate number of men to be on duty at a time.

The Governor pointed out, that the wall enclosing the hospital and grounds was about a mile in circumference, and had to be guarded day and night. The number of men then allowed was 9 sentinels by day and 12 by night.

The Governor requested that this number should be doubled, and that sentinels should be posted outside as well as inside the wall to prevent the too frequent desertions. The Governor was granted 15 additional men. The sentry boxes were on wheels, so as to be continually moved, in order that the patients should not determine the exact position of the sentry.

After the soldiers' guard came the old Dockyard Police force.

This was a force of special police, who were employed for the protection of the Dockyards and other naval establishments.

The force patrolled the hospital until 1860, when the Dockyard and hospitals were taken over by the Metropolitan Police.

The men of the old Dockyard Police were absorbed into the new force, which have continued ever since to guard the interests of the Naval Hospital.

Although there is not the inducement for the men to desert as formerly, yet the prevention of desertion is but a minor part of the Policeman's duties at the present day. It is due to the vigilance of the Police, that the precincts of the hospital are kept clear of undesirable characters, and that the smuggling of articles either into or out of the hospital is frustrated.

The present police force consists of a station sergeant, at the head, two sergeants, and eleven constables; one constable is detailed to look after the fire arrangements and engines, which takes up the whole of his time.

CHAPTER XXVII.

Patients.

HASLAR in its infancy, as we have seen, only admitted a small proportion of the crowd of sick and wounded that were sent on shore. Some were sent to a hospital at Fareham, some to a hospital at Forton, while others were scattered over the town of Gosport in private houses as well as the public houses. We can imagine what care and treatment would be bestowed upon poor suffering humanity in a public house, with the sign of the "Dog and Bull," if it were not proved by the complaints of the Physician and Council, who ordered that the patients, quartered there should be moved, and no more sent.

Frequent complaints are made of the crowded state of the houses in Gosport, where the sick were quartered; of the dirty condition of the beds, etc. Officers seem always to have been quartered in the town of Gosport or Portsmouth. One Officer was brought to book for obtaining a ticket for sick quarters on shore, from the Surgeon of his ship, by fraudulent means.

The patients were often received into Haslar in a wretched condition.

In those days there were no uniform nor dress regulations laid down for the seamen, as a consequence we have frequent reports from the Physician and Council, that "many patients are sent here sometimes with a single jacket, and at other times with no clothes in their hammocks, we are also in danger of being overrun with vermin from the men having no shift of linen." Again "many patients relapse into fevers and rheumatism for want of clothing." It is reported that Officers' servants are sometimes sent on shore nearly naked, one man had only a pair of trousers and a shirt quite worn out. We have the Physician and Council reporting that men were kept in hospital because they had "no clothes to go out in," while others "were entirely destitute of clothing."

We have frequent reference to the vermin in the men's clothing, and to "lousy bedding." All the men's clothing and bedding were put into the "smoake house" on the admission of the patients, to be smoked. In 1756 the Board enquired of the Physician and Council, if the shed used for smoking the clothes, answered the purpose for which it was designed, viz. killing the vermin.

The Physician and Council were reluctantly compelled to answer that it did not.

The patients received into Haslar were not exclusively confined to men of the Royal Navy. Soldiers were several times received. In 1757, orders were received at Haslar to admit "all soldiers and women who may be sent on shore with small pox, from the transports at St. Hellen's," and again in 1760, the Physician and Council were to receive "such infirm provincials from America, made prisoners of war, as shall be brought to Portsmouth." While in 1808 the hospital was lent to the Army for a time.

The staff at the hospital must have been kept fully employed if we are to judge from the number of patients entering the hospital and under treatment. The Physician and Council state that "between 17th Dec. 1757, and 14th Jan. 1758, we received into this hospital 693 patients, notwithstanding there were upwards of 900 in the house at the beginning of this period" and they were taken in "near a 100 at a time."

We have seen that patients on admission to Haslar, frequently required clothing, they no less urgently required the application of soap and water. Orders were therefore given that all patients that were considered fit to undergo the process by the Physician and Surgeons, were to be washed, and labourers were employed to bathe them in tubs.

The furnishing and equipment of the hospital were of the most primitive description, there were no

baths, nor were any baths installed during the first fifty years of the hospital existence. We have the Physician and Council complaining that they could not give effect to the order to wash the patients, as they were in want of "a copper for warming water fixed with a fire place."

Even at the beginning of the 19th century there were no baths, but patients were still bathed in tubs. Trotter says it was impracticable to get patients to bathe in these tubs, because they reminded them of scrubbing, by way of punishment, on board. Trotter considered that a "sailor under disease ought to be bathed like a gentleman."

We have frequent complaints from the Physician and Council pointing out the dire distress they were in for want of lint to dress their patients. Old linen was apparently supplied to the hospital instead of lint (1756), and the labourers on the surgical side of the hospital were constantly employed "scraping lint," from the old sheets and nightshirts supplied to them by the Matron. The Matron also cut up the old sheets to make caps for the patients.

CHAPTER XXVIII.

Liquor and Smuggling.

ONE of the most frequent causes of trouble and insubordination in the hospital was the introduction of intoxicating liquors.

The patients were allowed to have a drink of beer to quench their thirst between breakfast and dinner, and also between dinner and supper, should their thirst demand it. The wines and porter prescribed by the Medical Officers, were also on a very liberal scale, but if any patient was receiving more than one bottle of wine a day, it had to be specially reported.

It was no uncommon event to receive patients in a state of intoxication. Alcoholic liquors appear to have been easily procured in those days, with the result that the patient often had a drinking bout with his mess-mates before taking his departure for the hospital.

Liquor was smuggled into the hospital by the patients, by their friends outside, by traders in the way of business, and in various other ways. Soldiers were in the habit of throwing bottles of gin over the

wall, to the sailors inside, and we find the Physician and Council taking measures "to prevent patients getting liquors through the bars,"

The Physician and Council report to the Commissioners "that the hospital swarms with publicans every day, and provisions and liquor are introduced more frequently than ever." They further relate the punishment that was awarded to the offenders caught dealing in liquor within the hospital. "We found four retailing spirits in the house, two escaped, but the two others we got impressed, and believing this last severity will put an entire stop to it."

They were shipped off to Spithead to serve their King and Country. It is astonishing to find that the patients were able to smuggle such large quantities of liquor into the hospital. In June, 1779, a patient smuggled at least five gallons of liquor into the hospital, from his ship, in bladders. The nurses and even the guard were not always above suspicion of smuggling liquor for the patients.

Smuggling was also carried out on a large scale, as we read of "a large seizure of brandy made on the beach at the back of the hospital, in which one of the labourers was concerned."

Desertion.

Desertion.—It is stated that in 1755, Haslar was a common "take off" for deserters, and it is not surprising that the poor fellows used every means in

their power to regain their freedom. The Navy in those days could not be recruited by voluntary enlistment, recourse was therefore had to force by what was called "the press-gang." The press-gang captured the able-bodied seafaring man when possible, but on failing to secure seamen, they pressed landsmen ; and on the numbers proving insufficient, the authorities took the scum of the population, prisoners from the jails, and patients from the hospitals.

The hospital boundary wall was patrolled by a guard of soldiers, who had their quarters in Fort Monckton, but they could not stop the desertion. We therefore find the Physician and Council submitting a proposal to lock the patients in the wards at night.

It was the custom to offer a £1 reward for the recovery of a deserter, the money being deducted from his wages. This regulation seems to have been in obedience for a short time, with the following result as related by the Physician and Council.

"Since the patients have been informed that the reward of 20/- is no longer to be given for taking up seamen who desert from hospital, they have become extremely riotous, insomuch that forty or fifty men have gone over the hospital walls in the middle of the day, some of whom return often drunk, and in a worse state of health than when they went out."

Desertions continued all the time the hospital was in charge of the Physician and Council, nor were they checked by the appointment of Governor and Lieutenants.

Soon after the appointment of a Governor, he petitioned the Lords Commissioners to enclose the South-west side of the quadrangle with high iron railings, (1796) also to have the windows barred with heavy cast-iron gratings; the doors were also all locked at sunset, but notwithstanding all these precautions the desertions went on as before.

To shew the devices by which men effected their escape from the hospital, we read on Sunday night, (1796), four men escaped by lowering themselves down through the bogs, into the main drain of the hospital, and out into the Creek.

A sentry was placed at the mouth of the drain, and caught one man the first night. The Governor found on examination that it was perfectly accessible at low water day or night, either to go from or come into the hospital, and he was confident that quantities of liquor have been smuggled in by that means, and many men have escaped. The old sewer is a brick culvert 6 ft. 3 inches in height by 3 ft. 4 inches in width, and ran in a straight line from Haslar Creek up the centre of the quadrangle to near St. Luke's Church. It had also full sized side branches

It was also suspected that the patients bribed the nurses and sentries with liquor in order to be allowed to escape, as much as three full bottles of wine having been found on one patient, saved up from the allowance, daily prescribed by the doctor.

The Governor sent in a return showing the number of men who had made good their escape from the hospital; the numbers were more or less incomplete, except for the year 1797, when 180 men are reported to have run.

When the seamen of the eighteenth century failed to get out of the navy by desertion, or if his nerve was not equal to the attempt, he frequently made use of another method of escape from the service, namely, by endeavouring to outwit the doctors, by feigning sickness, or as it is called "malingering."

Dr. Trotter who was Physician to the hospital towards the end of the eighteenth century, says, that the patient was frequently detected malingering. "He employs caustics to produce ulcers, and drinks a decoction of tobacco to bring on emaciation, sickness at stomach and quick pulse."

Trotter also considered that empressment brought on a kind of mental affliction, peculiar to men who had been impressed, and that numbers perished from this alone, without any other apparent disorder.

CHAPTER XXIX.

Diet of Patients.

WE have seen the class of men that manned the fleet, during the latter half of the eighteenth century, and the sources from which they were drawn. We need not therefore be surprised to find the patients in the hospital obstreperous, and at times almost mutinous. It appears to have been the custom of the convalescent patients, to carry their meat away with them from the hall, where they were supposed to eat it, into the wards.

The Physician and Council complain that "we have several times endeavoured to prevent them from taking their meat from the hall, but to no purpose; nor durst we attempt it by force without danger of our lives."

Now in the early days of the hospital there was no fixed scale of diet for the patients, as we find to day. In October 1758, "a scheme of diet having been fixed upon by Dr. Maxwell, it was settled that the patients upon recovery, and who dine in the hall, should be allowed no small bread to their broth, but that, as

they had a pound served them every morning they were to make use of it in such a manner as they should think proper.

Seeing the Doctor's departure from hence, the patients have one and all, (as they term it) refused to take their broth, except they are to have an extra allowance of bread given them with it. Nay, they have proceeded to that degree of insolence, as to throw their broth away, and carry their meat with them from the hall, where they should eat it. One spirits up the other so, that it will be attended with some danger if not immediately inquired into.

P.S.—We are of opinion that a great many of the ringleaders of this cabal are cheats, and ought to be discharged."

The Physician and Council explain that, "The chippings of the bread formerly put in the broth, were by Dr. Maxwell's directions put into puddings for the men on low diet, together with the crumb, which last was alone used in the puddings formerly."

Any reduction or alteration in the food usually supplied to the patients, would naturally produce great discontent. The Board reduced the allowance of salt to each patient, with the following consequence, "when the patients on full diet sat down to dinner in the hall, they complained of want of salt. The butler informed them with great good humour that they had been served with the quantity ordered by the Board, but

they grew riotous and violent, and abused the butler, and threatened loudly the Steward and Agent. He went in and tried to appease them by promising to ask for a greater amount, but this would not have appeased them, had we not threatened them by the guard."

That the patients did occasionally break out into riotous conduct, we have the report that on the the afternoon of 13th June, 1797, between two and three hundred patients assembled together, and in defiance of all authority, seized a marine who was in charge of the arms of the patients, dragged him to the South-west pump, where they ducked him, and then beat him severely. This, because he was suspected to be an informer.

Although the Commissioners of the sick and wounded had repeatedly given orders that all the effects of the patients admitted to hospital should be duly entered in a book, yet no book was ever kept, and consequently we have constant complaints of the losses sustained by the patients. The Agent explains that the whole amount of the effects of people who die in the hospital, is what he receives from "the Nurses who attend the party in his sickness, which cannot be depended upon."

Mr Trotman says, the clerk appointed by him for the purpose. omitted to do it, and was therefore discharged. Later, we are informed that this reason was not founded on truth.

There is an amusing reference to a lunatic patient, who was reported to be "an improper object for cure, either for this hospital, or for Bedlam, having a strong impression of his being a King, and that he shall never die." The Physician and Council consider that "as he is a useful laborious man in doing drugery, but he is not capable of taking care of his wages," he should be kept at the hospital, where his labour would pay for his provisions. In 1761, buckles and straps were ordered to be fitted to the beds in the fever wards to restrain delirious patients.

Officer Patients were not received into Haslar Hospital for many years after its inauguration; they were lodged in sick quarters, private houses in Gosport and Portsmouth, a few Officers were sent to Haslar towards the end of the eighteenth century, but it was only on 1st July, 1801, that orders were given for all Naval Officers, who might come on shore on sick quarter tickets to go to the Officers' wards in the Naval Hospitals

The conduct of the sick Officers in lodgings on shore was often very irregular; we read of the landlady reporting to the Medical Officer, that the sick Officers returned to their lodging often very late at night and that some of them stayed out all night. We find the same thing happening in the Naval hospital, it was no uncommon occurrence for an Officer to leave the hospital and stay away all night, while under treatment.

In 1799 there is a report of the "highly reprehensible conduct of Lieut. Gibson, who when drunk, tried to pass the Porter at the the gate, afterwards he was seized by the guard in the airing grounds for attempting to escape from the hospital. He behaved very rudely to the Officer of the guard, but finding that he was a Lieutenant of the Navy, the patient was suffered to go to his cabin."

The clergyman, Rev. J. Hall, left his apartments in the hospital in 1798, these apartments were then fitted for the reception of Officer patients, but the Medical gentlemen were fearful that some unpleasantness might possibly arise between them and the private families. They therefore recommended that few be placed together, and that some of the servants of the hospital be taken out, so as to give more room for Officer patients.

The conduct of the Officer patients seems to have been quite as disorderly as the common sailors.

We have accounts of Midshipmen deserting and being captured again by the guard. We have records of Lieutenants smuggling spirits into the hospital, bladders filled with spirit was a favourite method, at that time, of smuggling.

The house used as a "sick quarters" for the treatment of patients in Gosport, was given up in 1763, when Haslar and other establishments were reduced to a peace footing.

We find a fixed scale of diet was established about 1788 for the patients. This consisted of Low, Half and Full diet.

The Low diet consisted of watergruel, panado, rice gruel, milk pottage, or broth, and bread and butter if necessary. For drink, toast and water, ptisan, or white decoction.

Half diet. For breakfast, milk pottage ; for dinner, half a pound of mutton, some light bread-pudding, or in lieu of it, some greens, a pint of broth, one pound of bread, one quart of small beer ; the men upon this diet to dine in their own wards.

Full diet. Breakfast as above. For dinner, one pound of meat, one pint of broth, one pound of bread, three pints of small beer ; supper in the last two named diets to be of broth left at dinner, or if thought necessary, to be of milk pottage.

Rice milk, orange whey, orange and lemon water, tamarind whey and water, vinegar whey, balm tea, sage tea. These to be discretionally ordered by the Physician and Surgeon.

CHAPTER XXX.

Patients at the present time.

THE regulations relating to the reception, the maintenance and disposal of patients, at our Naval hospitals, forms a rather bulky volume, which it would be impossible for me to give in detail.

As may be surmised from past experience the regulations concerning patients' effects are very stringent. Each patient brings a voucher from his ship, which gives a detailed list of all his effects and moneys, and the Storekeeper and Cashier must see that all the cash and valuables, belonging to a patient on admission, are entered in a book for the purpose, and initialled by the Medical Officer.

The patients must on no account take moneys or valuables into the wards.

Each patient has a bath on admission, unless countermanded by the Medical Officer ; and he is put into a clean bed and bedding, and clean body linen.

The Storekeeper and Cashier draws up, gratuitously, when requested to do so, the last will and

testament of the patient. This is done on the established form, and after being registered, is transmitted to the Accountant General, Inspector of Wills.

Such a thing as desertion from the hospital, at the present day, is almost unknown. The friends of a patient have been known to smuggle plain clothes into the hospital, in which the patient has disguised himself, and walked out on a Sunday afternoon, as an ordinary visitor.

The number of old Pensioners now in hospital, those who are maintained by the Greenwich Hospital Fund, is rapidly decreasing, only three permanent, and four non-permanent remaining.

All patients who die in hospital are buried at the public expense, while the effects of deceased officers and men, are not given up to the relatives and friends, without the authority of the Inspector of Seamen's Wills.

The patients while in hospital wear the hospital clothing. All articles of this clothing are of flannel, both underwear and outside garments. Patients inside the wards have white flannel, and in the grounds blue flannel coats. He is supplied with grey worsted stockings; the only articles which belong to himself, and which he wears while in the hospital are his cap and boots, while in the grounds; he wears slippers in doors. He also wears, if a blue jacket, his own black silk neckerchief; should the patient be a marine, a dark blue neck tie is supplied from the hospital clothing store.

Diet of the patients at the present day. The scale of diet for the sick is divided into three kinds, Low, Half and Full diet, with a liberal supply of extras, which can be ordered by Medical Officer.

The chief articles in the hospital diet scale are as follows,—

Articles.	Full.	Half.	Low.
Bread ...	1 lb.	1 lb.	8 oz.
Beef or Mutton alternately roast or boiled	1 lb.	8 oz.	
Potatoes or Greens	1 lb.	8 oz.	
Tea ...	4 drs.	4 drs.	4 drs.
Sugar, moist ...	16 drs.	16 drs.	16 drs.
Milk for tea ...	$\frac{1}{3}$ pint	$\frac{1}{3}$ pint	$\frac{1}{3}$ pint
Milk for diet ...			1 pint
Broth ...	1 pint	1 pint	$\frac{1}{2}$ pint

Veal, fowls or fish may be substituted for the Beef or Mutton.

Nearly all the patients are allowed rice puddings or custards, also butter, eggs, and extra milk. In fact, so numerous and so varied are the extras, that any food considered desirable by the Medical Officers, can be ordered for the patients.

The meals for the convalescent patients are at the following hours, Breakfast at 7.30 a.m., Dinner at 12 noon, and Tea at 4 p.m.

CHAPTER XXXI.

Instruction at Haslar.

HASLAR at the present day includes a school, where a course of instruction is given to the Surgeons who have just entered the service, but this is not the first time that the material in the hospital has been utilised for instructing the Medical Officers of the Navy. We find that towards the end of the eighteenth century, Dr. Trotter who was Physician to Haslar Hospital, instituted clinical lectures in one of the wards after the model of the Royal Infirmary, at Edinburgh. Cases were selected from the various wards to illustrate the lectures which were held once a week, or once a fortnight, throughout the winter

Dr. Trotter considered that the public service would derive incalculable advantage by converting Naval Hospitals into seminaries of education for Navy Surgeons, but that the Government would have to allow a certain sum to the Physician and Surgeon who undertake the respective clinical wards and lectures. He therefore anticipated what has come to pass, at Haslar, a hundred years later.

Again we find a Dr. Scott, officially described as second Surgeon to Haslar Hospital and Lecturer; who on the 15th September, 1827, gave an introductory lecture, which was attended by twenty-two gentlemen belonging to the Hospital and H.M. ships in harbour and at Spithead. He held the position of Librarian as well, as we read in the Instructions for the Royal Naval Hospital at Haslar, one section headed, "Instructions for Librarian and Lecturer." His duties were to give a course of lectures twice a year in the practice of Medicine and Surgery, as far as may be more particularly applicable to the diseases which are prevalent among seamen, whether on home or foreign stations. Also occasional lectures on Physiology, Pathology, and Pharmacology, he was also to keep a record of Meteorological observations, for which purpose he was provided with proper philosophical instruments.

The Audience was confined to Medical Officers of the army and navy, whether on half pay or otherwise, and "other respectful individuals," who were expected to "observe the strictest decorum, and not presume to offer any remark on the opinions you may think proper to advance, either aloud, or by whispering, such practice being calculated to distract the attention of the lecturer and the student."

This title of Lecturer disappeared from the Navy list after 1840, and it is probable that the lectures and instruction ceased at the same time.

The present system of requiring newly joined surgeons to go through a course of instruction in those subjects which are not specially taught in the Medical schools of this country, dates from February, 1871, when the Admiralty decided to send Naval Surgeons to the Army School at Netley.

This as may be easily understood was not a satisfactory arrangement, it had the disadvantage to the Naval Medical Officer, of bringing him in contact with a condition of service, differing entirely from that which would constitute his future life. It was therefore considered, and rightly, that the training of young Medical Officers should be given by those with whom they would be afterwards associated, and who are thoroughly conversant with Naval requirements and life on board ship.

In February, 1881, Netley was abandoned by the Navy, and the Surgeons were henceforth sent to Haslar, where the authorities were suddenly called upon to start a Medical School, "de novo," without previous experience, without a laboratory, without any scientific appliances or instruments of any kind whatever; nevertheless, the advance has been so remarkable that at the present day the instruction at Haslar compares favourably with the Army school, or with other post graduate courses.

The task before the Medical Staff at Haslar, in March, 1881, was of no light nature, especially, as the

candidates were already waiting for instruction. The first thing to be done was to demand a list of utensils and chemical reagents for a laboratory, which itself had to be chosen and fitted with strong deal tables for work benches. Then microscopes and microscopic apparatus had to be procured before work could begin.

The onus of starting the Medical School at Haslar, and of conducting the course of instruction, was undertaken by Staff Surgeon Walter Reid.

Dr. Reid in his report on the conclusion of the first course of instruction, states, that the Surgeons joined in March, 1881. He divided them into four parties, so that each party should spend a month's ward work with each of the four Principal Medical Officers. They thus got a variety of examples of injury and disease, occurring in the service, and profited by the experience of the different Officers, belonging to establishment. Post mortem examinations were also conducted under Dr. Reid's superintendence.

A short course of bandaging and the management of fractures were given, having a special reference to the naval service. Visits were made to the Dockyard, where instruction in all that related to naval hygiene, as far as ships' construction was concerned, was given by Dr. Reid and an officer from the Constructive Department of the yard. Each class of ship was gone into separately, first by examination of the drawings, and then by inspection of one of the class on the stocks and afloat.

A number of visits was made to the victualling yard to give the Surgeons an opportunity of seeing all that relates to victualling and clothing of the Navy.

The instruction in laboratory work was of a very limited nature, as Dr. Reid says, owing to this department only getting into working order towards the end of the course ; still he was able to give some lessons in the qualitative examination of water, milk and lime-juice, and also some points in ventilation and meteorology.

Dr. Reid began to lecture on 4th April, and continued to do so twice a week to the end of the course, except when prevented by his duties in the hospital wards. The subjects gone over were water, air, and food, first generally, and then with special reference to the Naval Service.

Other subjects, such as work, discipline, cleanliness, were also treated, in so far as they bear upon the health of the Navy.

Dr. Reid in his report on the course, regrets that the instruction had been so incomplete, several important subjects had to be omitted, owing to the want of time and his own inexperience in such work. I think Dr. Reid ought to have been proud of the work he accomplished, which confirms the proverbial resourcefulness of the Naval Officer ; for no one could have anticipated the formation of a Medical School, and the instruction of a batch of fully qualified Medical men, within the short space of four months.

The second course ended on the 21st December, 1881. Dr. Reid was now able to give 28 lectures. They visited the Dockyard eight times; the victualling yard four times; lessons in laboratory twenty-nine times; Surgical exercises thirteen, and Post-mortem examinations thirteen.

Dr. Reid reports after three years experience, that the Surgeons now entering the Navy, were a progressive and decided improvement in the class of men seeking service in the Navy compared with those a few years previous.

The course of instruction was conducted by a Fleet Surgeon, assisted by a Surgeon, and a Surgeon for dental duties, much on the lines laid down by Dr. Reid, until the end of the 19th century.

The following are the details of the course of instruction for Surgeons on entry, as conducted until 1900.

By the Fleet Surgeon conducting the course.

A.—Lectures.

The lectures were on General hygiene, Naval hygiene, service journals, forms and correspondence: ambulance, and the duties of Medical Officers on the line of march; on the field of battle, and on board ship.

The subjects were treated in the following order.

1. The duties and responsibilities of Naval Medical Officers ashore and afloat,

2. General conditions of life on board ship ; effects of climate, and the different diseases met with on each Naval Station.

3. Nosological returns : the " blue-book " of the health of the Navy, and the Medical Officer's journal, each section of which was taken in detail.

4. Construction of ships of wood and iron, as far as was of hygienic importance with regard to ships as dwelling places.

5. Air and ventilation, with particular reference to H.M. Ships.

6. The Medical Officer's store and Medicine account, and other service forms.

7. Water and water supplies, storage and distribution ashore and float.

8. Construction of hospitals, particularly of Haslar Hospital.

9. Food and Dietetics, especially that of the Navy, Scurvy, etc.

10. Hygiene of camps and landing parties, ambulance work and drill

11. Duties on the line of march and field of battle ; Surgery on board ship, in Naval warfare. Hospital ships, ambulance trains.

12. Sewerage sanitation in towns, hospitals, barracks and ships.

13. Disinfection ashore and afloat.

14. Habitations on shore, soils and building sites; warming and lighting.

15. Personal hygiene; clothing and exercise; unhealthy occupations.

B. Practical instructions.

1. Every afternoon during the course (except Saturdays and Sundays) individual instruction was given to each Officer in turn, between the hours of 2 and 4.30 p.m. in compilation of nosological returns, Journals, service accounts, forms and correspondence.

2. On Friday Mornings from 10.30 to 1 p.m. practical instruction in H.M. Dockyard of the various types of ships, ventilation, water and food storage; accommodation for the sick, living quarters of the crew and other hygienic details. One morning the practical details of the ventilation, water supply, sewerage, and other sanitation of Haslar Hospital were demonstrated. One or two visits were made to Clarence Yard to demonstrate the clothing, bedding, and food supplies of the Navy.

3. Practical instruction was given daily in the routine and administration of Naval Hospitals; the Surgeons being in turn attached to each division of the hospital, and given work in the wards from 9 to 11 a.m. daily.

4. The Surgeons under instruction perform the post mortem examinations in turn, under the supervision of the Fleet Surgeon instructing.

By the Surgeon assisting Fleet Surgeon.

A course of instruction in practical hygiene and meteorology in its relation to public health.

Practical instruction in reading meteorological instruments every morning. Also inspection of food brought into the hospital in the early morning, fish, fowl and meat, each Surgeon attending the observatory and meat inspection in turn.

Practical demonstration on the analysis of air; on the impurities in air, and the means for their detection.

Analysis of milk, and the detection of impurities and adulterations. Examination of fish, flesh and fowl, microscopical preparations &c.

Practical instruction in the examination of water, and its fitness for domestic and other purposes.

Examination of flour and the examination of the different starches; instruction on bread and Navy biscuit; butter, lime juice, beer, vinegar, tea and coffee.

Instruction in meteorology and its application in the study of climatology. The use of meteorological instruments, and the compilation of statistics.

Instruction in Dentistry by a Staff Surgeon. The course was divided into three parts.

- 1 Lectures.
- 2 Practical instruction on models.
- 3 Practical instruction in dental operations on patients.

The first three weeks of the Dental course was devoted to lectures, and the remaining time to practical instruction, for the latter the Surgeons were divided into sections, the number of Surgeons in each section depending upon the number of Surgeons under instruction. Each section attended the practical course in turn.

CHAPTER XXXII.

Present System.

AT the opening of St. George's Hospital Medical School, on 3rd Oct. 1897, Sir Patrick Manson delivered a speech, in the course of which, he advocated the study "Tropical diseases" to all Medical Students, and stated that the only institutions where instruction in Tropical medicine was given, were the Naval Hospital at Haslar, and the Army School at Netley. It was pointed out in a letter in the "Times," that instruction was not given at Haslar in "Tropical diseases," a long correspondence followed, the "Globe" newspaper also joined in the discussion, and stated that "Military Surgery" was likewise absent from the educational course, at Haslar.

This discussion in the public press, aroused the Admiralty to the necessity of taking some action in the matter. They therefore called upon the Fleet Surgeon conducting the course to furnish a report of the course, and the subjects taught therein. As a result of much

correspondence, and the deliberations of Sir Arthur Moore's Committee in 1900, it was decided to revise the educational course at Haslar, so as to include the study of "Tropical diseases," Bacteriology, Military Surgery, etc.

A Naval Medical Officer, W. P. Bassett-Smith was selected to instruct the Surgeons in "Tropical diseases," Pathology, and Bacteriology. He, after a course of study at the Albert Dock 'Tropical Diseases School, commenced work at Haslar in the beginning of the year 1900.

The course of medical instruction as conducted at Haslar, at the present time.

The course is conducted by a Fleet Surgeon, appointed for that purpose. An additional Medical Officer, of the rank of Fleet or Staff Surgeon acts as Instructor in diseases of Foreign stations, and Bacteriology. An Assistant Instructor, one of the Surgeons of the hospital, is selected by the Director General ; while instruction in Dentistry is given by a Civil Surgeon-Dentist, appointed to Haslar.

The course lasts four months, and is to be free from interruptions. Lectures and practical instruction are given in the following subjects. by the Officers instructing.

Fleet Surgeon
conducting the
course.

Naval hygiene, Lectures and practical demonstrations in His Majesty's Dockyard and victualling yard.
General hygiene, Lectures and demonstrations, Journals and service correspondence.
Naval Surgery, short course of lectures.
Ambulance work ashore and afloat.
Duties on the line of March and in the field.
The fitting out of a hospital ship.

Instructing Fleet
or Staff Surgeon.

Lectures on diseases of foreign stations.
Clinical lectures on cases in wards for special diseases of foreign stations, Pathology of the above diseases.
Bacteriology.
Examination of blood &c. in Malarial fevers, and other affections.
Instruction in Röntgen Ray apparatus and other electrical appliances, (high frequency apparatus &c.) Photography as necessary.

Assistant
Instructor.

Air analysis.
Water analysis.
Food analysis adapted to service afloat.
Food inspection; lectures and practical demonstrations.
Meteorology; lectures and practical instruction in the use of instruments.
Serum therapeutics, including snake bites.
Ambulance drill.
Examination of the recruit, lectures and practical instruction.

Surgeon-Dentist. { Lectures, and practical Dentistry.

The instructing Fleet or Staff Surgeon has charge of Special wards for the treatment of diseases met with on Foreign stations, upon which cases, clinical lectures are given. He is also the Curator of the Museum. He is not available for other duties, in the Hospital.

Three prizes are awarded at the close of each course of instruction to the Officers who have shown the greatest proficiency, one for each group of the subjects, the prizes being of the approximate value of £10 each. For group I. the prize is a gold medal ; for group II. a microscope ; and for group III. including dentistry a silver medal and books. No Officer can receive more than one prize.

CHAPTER XXXIII.

Conclusion

IN this brief retrospect of Haslar Hospital, we have seen what vast and varied changes have occurred during the 150 years of its existence. How the old Hospital has gradually and almost imperceptibly given place to the new. How the old administration has been changed from Physician and Council to Governor, and then Captain Superintendent, and finally to the Senior Medical Officer of the Staff.

We have seen the changes undergone by the Medical Officers in numbers, qualifications, and titles.

We have seen the revolution of the Nursing system from the old women nurses and decrepit Naval pensioners to the present system of trained male nurses, available afloat or ashore, and the highly skilled lady nurses.

Not the least change is that among the seamen patients. The character of the sailor, to day, is altogether at variance with the bluejacket of old. The old salt had not a few good points and sterling qualities,

but his follies and his vices were also many. "His mind was uninformed and incultivated. He was equally credulous and superstitious." In his habits he was intemperate and extravagant, and as he was recruited either by the press or from jails and prisons he frequently laboured under physical disease, or was morally tainted. The seaman of to day is an educated, highly skilled and trained man; he does not indulge in those Bacchanalian outbursts which characterised the British tar of old. His constitution is therefore sounder and more amenable to treatment in disease or injury.

The *raison d'être* of the hospital, is, after all, for the treatment of injuries and to alleviate the sufferings under disease of our seamen and marines.

The treatment of diseases has changed, likewise, with the times; but what is even more remarkable, the diseases themselves have undergone a complete transformation. Many of the diseases which filled the hospital a hundred and fifty years ago I have never even seen; while the commonest diseases of to day scarcely find a place in the nomenclature of that age.

There is no published account of the diseases treated in Haslar in the eighteenth century, but we get glimpses of the appalling mortality from the writings of Blane and others, as has been already mentioned.

The first report was published in 1869, in the Health of the Navy. The mortality was then 9·9 per

1000; it has gradually decreased until it is now 4·45 per 1000. There is one disease however, which has not decreased, but has on the contrary, nearly doubled itself, since that date, viz., Insanity.

In 1869, the insane patients were ·4 per 1000, in 1905 they were nearly ·8 per 1000.

The greatest difference in the returns from Haslar hospital, is, as may be surmised, in the domain of Surgery. Surgery was at a very low ebb in the old days, when a man, we are told, who had no knowledge of anatomy or scientific training, attended the hospital daily, to bleed the patients, and when a vacancy occurred in the Surgical Staff of the hospital, the 'bleeder,' as he was called, had the temerity to offer himself as a candidate for the appointment.

Even in the year 1869, the total number of operations performed in Haslar, was only fifteen viz: Amputation of finger 1. Tapping hydrocele 8. Operation for Fistula 3. Excision of tumors 2. And removal of Necrosed bone 1.

In 1904 in Haslar, there were 1,172 operations, many of them major operations, such as removal of appendix. Operations on the liver and kidneys.

Such operations in Surgery require a large quantity of material as dressings, it is therefore an immense stride from the day when labourers prepared lint from the old hospital sheets and shirts, to the present year, when in three months 5,000 yards of gauze were expended as dressings.

The bandages' demand for the year, total the immense number of 52,800, viz., Alembroth 16,800, Cyanide 18,000, Webb 9,600, and Flannel 8,400.

The Dispensary has been altered to the changed condition of the medicines now issued. Formerly the drugs were received in bulk in the crude state, and required much preparation and compounding.

To-day the active principles only are used, and the medicines are issued more and more in the compressed form, as tablets or tabellæ.

A machine has just been introduced into the Dispensary for making these tablets, it was formerly worked by hand, but is now driven by electro-motor.

A machine is also being fitted for making emulsions of cod-liver-oil, and of cod-liver-oil and malt, also, to be driven by electricity, about 9 or 10 lbs of these emulsions are issued daily.

The expenditure of stationery at Haslar is on a large scale, and if the progress of an institution is to be judged by its literary consumption, then Haslar ought to be well to the front.

The Physician and Council made a demand for stationery, on 8th Feb., 1757, which was exceedingly moderate, viz., 3 quires of one sort of paper, and 1 quire of another, 100 pens, $\frac{1}{4}$ lb of sealing wax, and the same amount of wafers, 3 black lead pencils, 1 quart of black ink, 1 pen-knife, and two pieces of red tape.

To-day the demand is something like,—

Paper, 595 quires, foolscap, and 296 quires of small note paper.

Pens, 150 quill, and 62 gross steel.

Black-lead pencils 110 dozen.

Ink blue-black 72 quarts.

Ink red 18 pints.

Red tape 110 dozen pieces.





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